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Dedicated to Gabriel

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Summary

Appreciation and feedback at work could barely be more popular at the moment. In particular, practical recommendations stress the effectiveness of appreciation and feedback in boosting employee motivation and performance, and provide specific suggestions on how they should be applied at work. The aim of this dissertation is to scrutinize some of the practical recommendations on appreciation and feedback in the context of existing theories and empirical results, and to put these recommendations to an empirical test.

The first part of this research focused on the practical recommendation to boost employee motivation and performance with appreciation by investigating whether the effects of appreciation are as positive as commonly assumed. We used social exchange theory and the norm of reciprocity to theoretically explain why employees who feel appreciated at work will return this goodwill with increased work engagement and organizational citizenship behavior. We conducted a cross-sectional online survey (N = 183, 53% female) and a two-wave online survey (N = 117, 68.4% female). As expected, perceived appreciation positively affected work engagement and organizational citizenship behavior, and explained unique variance over and above leader-member exchange and perceived organizational support. Positive reciprocity norms moderated the effect of perceived appreciation on work engagement. Perceived appreciation also mediated the positive effect of feedback environment on work engagement and organizational citizenship behavior. Our results imply that perceived appreciation acts as a socioemotional resource which elicits obligations to reciprocate within the employee.

The second part of this research challenged the practical recommendations that positive feedback should precede negative feedback in order to soften the blow of the negative feedback that is yet to come and that feedback should always be specific to improve performance. To make specific predictions about the effects of feedback order and feedback specificity, we developed a simple, schematic self-regulatory action cycle based on common theories of self-regulation and models of feedback processing that starts with the feedback message and ends with (potential) performance improvement. We conducted an online experiment (fictitious written feedback, N = 198, 83.3% female) and a laboratory experiment (genuine face-to-face feedback, N = 100, 49% female). The effects of feedback order were as expected: a feedback order negative-positive was perceived more negatively and led to more performance improvement than a feedback order positive-negative. Further, the effect of feedback order on

performance improvement was mediated by perceived negativity. Unexpectedly, feedback specificity did not affect performance improvement. Specific feedback in the order negative-positive resulted in the highest performance improvement (interaction between feedback order and feedback specificity). Our results imply that feedback messages should start with negative feedback if the primary objective is to improve employee performance.

The third part of this research changed perspective by focusing on the effects of feedback content (i.e. if the feedback to given is positive or negative) on the feedback giver. We expected effects of feedback content on the giver's experienced effort, affect, and satisfaction because of anticipated face loss, the resulting attempts to mitigate face threats, and empathic reactions of the feedback giver. We conducted a scenario experiment ($N = 172$; 70% female) in which participants gave positive or negative written feedback. As expected, feedback givers perceived giving negative feedback to be more demanding, less satisfying, and experience less positive and more negative affect after giving negative feedback. Further, a follow-up study (scenario experiment, $N = 113$, 72% female) provided support for our theoretical assumption of anticipated face threat by showing that feedback recipients judged the feedback giver to be less warm and less competent after receiving negative feedback. These results might explain the reluctance of managers and/or colleagues to give negative feedback.

The present studies demonstrate that appreciation and feedback can indeed be effective in boosting employee motivation and performance. However, results also show that concerning feedback, it may be difficult to find a balance between the recipient's and the giver's needs. Further, these studies do not provide a final conclusion about whether practical recommendations should generally be accepted or rejected. Future research could focus on the development and dissemination of valid practical recommendations which might contribute to a sustainable improvement of working conditions.

Zusammenfassung (German Summary)

Wertschätzung und Feedback bei der Arbeit könnten momentan kaum populärer sein. Praktische Empfehlungen unterstreichen insbesondere die Effektivität von Wertschätzung und Feedback beim Steigern von Mitarbeitermotivation sowie -leistung und geben spezifische Hinweise, wie diese bei der Arbeit eingesetzt werden können. Diese Dissertation zielt darauf ab, einige dieser praktischen Empfehlungen im Kontext existierender Theorien und aktueller empirischer Befunde zu hinterfragen sowie diese Empfehlungen empirisch zu überprüfen.

Der erste Teil der Untersuchungen konzentriert sich auf die praktische Empfehlung, Leistung und Motivation der Mitarbeiter/innen mittels Wertschätzung zu steigern, und untersucht daher, ob die Auswirkungen von Wertschätzung tatsächlich so positiv sind wie allgemein angenommen. Mithilfe der sozialen Austauschtheorie sowie der Reziprozitätsnorm erklären wir, wieso Mitarbeiter/innen, die sich wertgeschätzt fühlen, im Gegenzug mehr Arbeitsengagement und Extra-Rollenverhalten zeigen. Wir führten eine Querschnittsstudie (N = 183, 53% weiblich) und eine Längsschnittstudie (N = 117, 68.4% weiblich) durch. Wie erwartet hatte wahrgenommene Wertschätzung positive Effekte auf Arbeitsengagement und Extra-Rollenverhalten und erklärte zusätzliche Varianz über wahrgenommene organisationale Unterstützung und Vorgesetzten-Mitarbeiter-Austausch hinaus. Positive Reziprozitätsnormen moderierten den Effekt von wahrgenommener Wertschätzung auf Arbeitsengagement. Wahrgenommene Wertschätzung mediierte zudem den positiven Effekt der Feedback-Umgebung auf Arbeitsengagement und Extra-Rollenverhalten. Die Ergebnisse dieser Untersuchungen implizieren, dass wahrgenommene Wertschätzung eine sozioemotionale Ressource darstellt, die bei Mitarbeiter/innen eine gefühlte Verpflichtung, diesen Gefallen zu erwidern, auslöst.

Der zweite Teil der Untersuchungen hinterfragt die praktischen Empfehlungen, Feedback mit positiven Inhalten zu beginnen, um den Schock der nachfolgenden negativen Inhalte abzumildern, und Feedback zum Zwecke der Leistungsverbesserung immer spezifisch zu gestalten. Um genaue Vorhersagen bezüglich der Effekte von Feedback-Reihenfolge und Feedback-Spezifität machen zu können, entwickelten wir einen einfachen, selbst-regulatorischen Handlungszyklus auf Basis allgemeiner Theorien zu Selbstregulation und Feedback-Verarbeitung, der mit einer Feedbacknachricht beginnt und mit (potentieller) Leistungsverbesserung endet. Wir führten ein Online-Experiment (fiktives Feedback, N = 198,

83.3% weiblich) und ein Laborexperiment (echtes Face-to-Face-Feedback, *N* = 100, 49% weiblich) durch. Die Effekte von Feedback-Reihenfolge waren wie erwartet: Feedback in der Reihenfolge negativ-positiv wurde negativer wahrgenommen und führte zu mehr Leistungsverbesserung als Feedback in der Reihenfolge positiv-negativ. Darüber hinaus mediierte die wahrgenommene Negativität den Effekt von Feedback-Reihenfolge auf Leistungsverbesserung. Unerwarteterweise gab es keinen Effekt der Feedback-Spezifität auf die Leistungsverbesserung. Spezifisches Feedback in der Reihenfolge negativ-positiv führte zur stärksten Leistungsverbesserung (Interaktion zwischen Feedback-Reihenfolge und -Spezifität). Die Ergebnisse dieser Untersuchungen implizieren, dass Feedback mit negativen Inhalten beginnen sollte, sofern das Feedback hauptsächlich auf Leistungsverbesserung abzielt.

Der dritte Teil der Untersuchungen stellt einen Perspektivenwechsel dar durch den Fokus auf die Effekte von Feedback-Inhalt (d.h. ob das zu gebende Feedback positiv oder negativ ist) auf Feedback-Geber/innen. Wir gehen davon aus, dass der Feedback-Inhalt die wahrgenommene Anstrengung und die Zufriedenheit mit dem verfassten Feedback sowie den Affekt von Feedback-Geber/innen aufgrund von antizipiertem Gesichtsverlust, daraus resultierende Versuche, Gesichtsbedrohungen abzuschwächen, sowie empathische Reaktionen der Feedback-Geber/innen beeinflusst. Wir führten ein Szenario-Experiment (*N* = 172; 70% weiblich) durch, in dem Versuchspersonen schriftliches Feedback (entweder positiv oder negativ) verfassten. Wie erwartet wurde das Geben von negativem Feedback als anstrengender und weniger zufriedenstellend wahrgenommen und führte zu weniger positivem und mehr negativem Affekt. Darüber hinaus unterstützen die Ergebnisse einer Folgestudie (Szenario-Experiment, *N* = 113, 72% weiblich) unsere theoretische Annahme eines antizipierten Gesichtsverlusts, da Feedback-Empfänger/innen eine/n Feedback-Geber/in nach dem Erhalt von negativem Feedback als weniger kompetent und warm einschätzten. Die Ergebnisse dieser Untersuchungen können erklären, warum negatives Feedback eher ungern gegeben wird.

Die vorliegenden Untersuchungen zeigen, dass Wertschätzung und Feedback tatsächlich Mitarbeitermotivation und -leistung steigern können. Die Ergebnisse bezüglich Feedback zeigen jedoch auch, dass es schwierig sein könnte, ein Gleichgewicht zwischen den Bedürfnissen von Feedback-Empfänger/innen und Geber/innen zu finden. Darüber hinaus ermöglichen diese Studien keine endgültige Schlussfolgerung hinsichtlich der Frage, ob praktische Empfehlungen generell akzeptiert oder abgelehnt werden sollen. Zukünftige Forschung könnte sich auf die Entwicklung und Verbreitung von validen praktischen

Empfehlungen konzentrieren. Dies kann zu einer nachhaltigen Verbesserung von Arbeitsbedingungen beitragen.

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1 Introduction

"Citius, altius, fortius" [faster, higher, stronger] (Mueller, 2008). This Olympic motto does not solely fit the challenges in sports but also the challenges for organizations. In a rapidly changing and profit-oriented world, organizations are under an enormous pressure to become more innovative, efficient, and profitable. The consequences of not complying with those challenges are severe: non-profitable organizations loose investors, get sold or shut down (which may also result in a massive lay-off of employees). Therefore, organizations are constantly searching for strategies to improve their innovativeness and performance.

One of the potential strategies to improve organizational performance is to improve employee motivation and performance (DeNisi & Smith, 2014; Podsakoff, Whiting, Podsakoff, & Blume, 2009). For some time, organizations have recognized that employees are key to the organizations' success and that it may be worthwhile to care for employees. It is therefore not very surprising that research as well as practical recommendations concentrate on the topics of employee motivation and performance. Practical recommendations and research mostly focused on formal strategies to enhance employee motivation and performance. As an example, implementing or improving an organizational reward system is a formal strategy to increase employee motivation and performance (Agarwal, 1998; Lawler, 2003; Thierry, 2005). However, there are also potential pitfalls associated with reward systems (Thierry, 2005, van Eerde, 2015), like for example the possibility of rewarding unethical behavior (Jansen & van Glinow, 1985). Moreover, formal strategies like reward systems often do not explicitly recognize or reward behaviors that go above and beyond the job requirements (so-called extra-role performance or organizational citizenship behaviors, cf. Organ, Podsakoff, & MacKenzie, 2006; Williams & Anderson, 1991) but which are of key importance to the organization's success (cf. Podsakoff et al., 2009). Therefore, an increasing interest in informal strategies that improve employee motivation and performance has emerged (cf. Nelson, 1993). This dissertation focuses on two informal strategies that may improve employee motivation and performance, namely appreciation and feedback.

The popularity of appreciation is constantly increasing as it is believed to have enormous positive effects on employees at work (e.g. Anderson, 2015). However, to our knowledge virtually no research on the effects of appreciation on employee motivation and performance exists. Moreover, the concept of appreciation is not yet embedded in any theory

which would explain these positive effects. Feedback as opposed to appreciation is part in several prominent theories (e.g. Bandura, 1991; Carver & Scheier, 1998; Frese & Zapf, 1994; Kanfer & Ackerman, 1989; Kluger & DeNisi, 1996; Locke & Latham, 1990) and there is a rich body of empirical research on the effects that feedback has on the feedback recipient (e.g. Belschak & DenHartog, 2009; Goodman & Wood, 2004; Liden & Mitchell, 1985). Unfortunately, however, the complexity of the feedback process is still not fully understood and empirical results are not seldom contradictory (cf. Kluger & DeNisi, 1996). It therefore comes as no surprise that popular media are overflowing with practical recommendations on how to motivate employees with both feedback and appreciation. Scientific results and theories either support or oppose these practical recommendations. This makes it difficult to conclude whether the recommendations should be followed or rejected. Therefore, the aim of this dissertation is to scrutinize some of these practical recommendations on appreciation and feedback in the context of existing theories and empirical results, and to also put these recommendations to an empirical test.

In the following, we will first introduce appreciation, feedback receiving and giving, and we will present selected practical recommendations which we will put to empirical testing. Afterwards, we will give an overview over the present research in this dissertation.

1.1 Appreciation at Work

Appreciation is currently an extremely popular concept which has found its way into several practical recommendations (cf. Anderson, 2015). Surprisingly, however, to our knowledge no formal definition of appreciation at work exists. Dictionaries such as the *Oxford Dictionary of English* define appreciation as "recognition and enjoyment of the good qualities of someone or something" ("Appreciation," n.d., para. 1). According to *Merriam-Webster*, appreciation is "a feeling or expression of admiration, approval, or gratitude" ("Appreciation," n.d., para. 1). Common about those two definitions is the positive recognition of a person and his or her accomplishments. Further, appreciation is related to evaluation by others according to Semmer and Jacobshagen (2003). We define appreciation as a general feeling of being acknowledged at work (cf. Semmer & Jacobshagen, 2003; Stocker, Jacobshagen, Semmer, & Annen, 2010). For example, employees may feel appreciated at work when they receive praise for good performance and/or when their thoughts and opinions about work-related issues are considered in an organization.

The concept of appreciation opposes some older German sayings like “their silence is praise enough” [“nicht geschimpft ist genug gelobt”] and conforms with newer trends and popular recommendations to show gratitude and appreciation to employees. Especially appreciation is believed to have powerful positive effects on employee well-being, motivation, and also performance (cf. Anderson, 2015). It is because of this belief that these popular recommendations to show appreciation exist. Interestingly, the effects of appreciation on employee motivation and performance have never been tested empirically (effects of appreciation on well-being have been tested, see Stocker et al., 2010; Stocker, Jacobshagen, Krings, Pfister, & Semmer, 2014). A prudent approach therefore would be to scrutinize the purported beneficial effect of appreciation by testing it empirically and by delineating a theoretical mechanism that explains these assumed positive effects. In addition, in order to develop suitable interventions for fostering appreciation at work, it may also be interesting to identify antecedents to perceived appreciation. In sum, the following research questions on appreciation are addressed in this dissertation:

> *Research questions 1: Are the effects of perceived appreciation on motivation and performance really as positive as commonly assumed? What is the theoretical mechanism that would explain these positive effects? What could act as contextual variable antecedent to appreciation?*

1.2 Feedback

Feedback is generally defined as information about (some) aspects of one’s performance or understanding (Hattie & Timperley, 2007; Kluger & DeNisi, 1996). When feedback is provided by an external agent (e.g. a supervisor, colleague, or subordinate), it is called external or extrinsic feedback (cf. Kluger & DeNisi, 1996). In particular, the provision of extrinsic or external feedback is also called a feedback intervention (FI, cf. Kluger & DeNisi, 1996)

Theory development and empirical research most often focus on the effects that external or extrinsic feedback has on the feedback recipient. Several theories – especially self-regulatory theories – incorporate the concept of feedback (e.g., Bandura, 1991; Carver & Scheier, 1998; Frese & Zapf, 1994; Kanfer & Ackerman, 1989; Locke & Latham, 1990; cf. Kanfer, Frese, & Johnson, 2017) with *Feedback Intervention Theory* being a self-regulatory theory that explicitly focuses on external feedback and how it affects learning and performance

(Kluger & DeNisi, 1996; a more detailed introduction of Feedback Intervention Theory and its propositions will be given in Chapter 3.1). In addition, empirical research puts emphasis on the design of feedback interventions, for example how feedback sign, feedback specificity, and feedback frequency, etc. (also called feedback intervention cues, see Kluger & DeNisi, 1996) affect the recipient's reaction to the feedback. The effects of feedback design can be on the recipient's well-being (e.g. Belschak & DenHartog, 2009; Ilies, De Pater, & Judge, 2007), learning (e.g. Goodman & Wood, 2004; Goodman, Wood, & Hendrickx, 2004; Lam, DeRue, Karam, & Hollenbeck, 2011), and/or performance (e.g. Cianci, Klein, & Seijts, 2010; Davis, Carson, Ammeter, & Treadway, 2005; Lam et al., 2011). Unfortunately, the effects of feedback on learning and performance are not uniformly positive. In their meta-analysis, Kluger and DeNisi (1996) reported an overall positive effect of feedback interventions on performance, but in more than 38% feedback even had detrimental effects on performance indicating that is not safe to assume that feedback interventions are always helpful. And even though there has been an active research on the effects of feedback since this meta-analysis (e.g. Belschak & DenHartog, 2009; Cianci et al., 2010; Goodman et al., 2004; Lam et al., 2011), the perception, processing, and response to performance feedback remains a complex process which can be affected by several characteristics of the feedback message and recipient (cf. Ilgen, Fisher, & Taylor, 1979; Smither, London, & Reilly, 2005) and which is still not fully understood.

Given the complexity of feedback and the in many cases contradicting results, it is not very surprising that numerous practical recommendations also focus on the design of feedback. These practical recommendations are mostly not very well grounded in existing theory and research, and often appear to concentrate on how the feedback situation can be designed more comfortably for the feedback recipient, in the hope that this also positively affects performance. One of the most prominent recommendations regarding feedback design is the recommendation to "sandwich" the negative feedback (e.g., Dohrenwend, 2002), i.e. to precede negative feedback by some positive feedback in order to soften the blow of the negative feedback that is yet to come. This focus on feedback order (the order in which positive and negative feedback is presented) is understandable given that in practice employee performance often involves both positive and negative aspects which should be reflected within the feedback. However, to our knowledge this practical recommendation on feedback order lacks systematic empirical testing (cf. Anseel, 2015). Moreover, feedback theories might assume an opposing prediction concerning feedback order: only if the negative feedback is painful enough

to attract the receiver's attention (i.e., if negative feedback is *not* 'softened' by precedent positive feedback), performance improvement is likely to occur. Besides feedback order, prominent practical recommendations often also focus on feedback specificity by assuming that feedback should always be specific. Empirical results, however, do not always support the assumption that specific feedback has positive effects on well-being, learning, and performance (cf. Davis et al., 2005; Goodman & Wood, 2004; Goodman et al., 2004, Liden & Mitchell, 1985). Because feedback specificity is part of both practical recommendations and theoretical accounts of feedback effects (Ilgen et al., 1979; Kluger & DeNisi, 1996), we also include feedback specificity in our research question. In sum, the following research questions on effects of feedback order and specificity on the feedback recipient are addressed in this dissertation:

> *Research question 2: How do feedback order and feedback specificity affect performance (theoretically and empirically)? How do feedback order and feedback specificity interact?*

Especially in the case of external or extrinsic feedback, a feedback intervention involves two parties: the feedback recipient and the feedback giver (the external agent who provides the feedback). Interestingly, to our knowledge research on the effects that feedback has on the feedback giver is quite scarce. This is unfortunate given that a feedback giver is a prerequisite for a feedback intervention to take place, especially at work where the feedback giver may be a supervisor, a colleague, or a subordinate. Research has already shown that feedback givers are often reluctant to criticize or deliver bad news (Rosen & Tesser, 1970; Tesser & Rosen, 1975; Tesser, Rosen, & Tesser, 1971) and feel uncomfortable evaluating someone's performance (Levy & Williams, 2004; Smith, Harrington, & Houghton, 2000; Pichler, 2012). In the meantime, popular media provide numerous recommendations on how to prepare for and design feedback in order to feel more comfortable while giving feedback (e.g. McCarthy, 2018). A thorough understanding of how feedback giving affects the giver may be, however, necessary to encourage feedback giving (e.g., through the development of suitable interventions). We seek to add a piece to the understanding of feedback giving by testing the effect of feedback content (i.e. whether the feedback to be given is positive or negative) on feedback givers. In sum, the following research question on feedback giving is addressed in this dissertation:

> *Research questions 3: How does giving positive or negative feedback affect the feedback giver?*

1.3 Overview over the Present Research

The following three chapters (Chapters 2 to 4) focus on the three major topics of this dissertation, namely appreciation (Chapter 2), effects of feedback order and specificity on the feedback recipient (Chapter 3), and effects of feedback giving (Chapter 4). Each chapter comprises two empirical studies that test the specific hypotheses we develop separately per topic. The chapters contain separate theoretical introductions and discussions so that they can be read independently of each other.

Chapter 2 targets the assumed positive effects of perceived appreciation at work. In popular media, appreciation at work is assumed to have powerful effects on favorable work outcomes such as employee and firm productivity. To date, however, these purported positive effects have rarely been empirically tested or theoretically underpinned. In the present research, we embed perceived appreciation in social exchange theory and use the norm of reciprocity to theoretically explain why perceived appreciation may positively affect work outcomes. We also identify feedback environment as a contextual variable antecedent to perceived appreciation. We conducted two studies, a cross-sectional online survey (183 employees of various organizations, 53% female) and a two-wave online survey (117 employees of various organizations, 68.4% female). Results indicate that perceived appreciation positively affected work engagement and organizational citizenship behavior. Moreover, perceived appreciation explained unique variance over and above well-known social-exchange constructs leader-member exchange and perceived organizational support. Positive reciprocity norms moderated the effect of perceived appreciation on work engagement. Perceived appreciation also mediated the positive effect of feedback environment on work engagement and organizational citizenship behavior. Our results imply that perceived appreciation acts as a socioemotional resource which elicits obligations to reciprocate within the employee. Organizations may use these insights to develop interventions that foster perceived appreciation at work.

Chapter 3 deals with the effects of feedback order and specificity on performance improvement. Drawing on Feedback Intervention Theory (FIT, Kluger & DeNisi, 1996), cybernetic theories of self-regulation, theory of action regulation, and phenomena of memory effects from cognitive psychology, we describe performance improvement through feedback as a function of two feedback characteristics, (1) order of presentation of positive and negative feedback and (2) feedback specificity. In two studies, our research demonstrates that otherwise identical (Study 1, $N = 198$, fictitious written feedback) or comparable feedback (Study 2, $N =$

100, genuine face-to-face feedback in individual 2-hour training sessions) leads to more negative perceptions of feedback if the negative information is presented first. This perceived negativity of feedback then acts as a facilitator of performance improvement (mediation effect), an effect that is stronger when combined with specific feedback (Study 2). These results are in line with FIT and they support common recommendations to provide specific (rather than general, non-specific) feedback. Yet, they diametrically oppose recommendations to begin a feedback message with positive feedback in order to 'soften the blow' of negative feedback that is yet to come (i.e., so-called feedback sandwich). Organizations should encourage managers and supervisors to start feedback messages with negative feedback if the primary objective is to improve employee performance.

Chapter 4 focuses on the effects of feedback giving. To date, research on feedback has mostly focused on the effects of feedback on the recipient. This research provides a change in perspective by focusing on feedback effects from the perspective of the giver. We tested the effect of feedback content (i.e. whether the feedback to be given is positive or negative) on feedback givers and assumed that feedback givers will experience giving negative feedback as more demanding, less satisfying, and experience less positive and more negative affect when giving negative feedback. We theoretically explain these effects with anticipated face loss, the resulting attempts to mitigate face threats, and empathic reactions of the feedback giver due to his or her personal experience with receiving feedback. We conducted two studies. In a scenario experiment (N = 172; 30% male) in which participants provided written feedback (either negative or positive), we showed that giving negative feedback was experienced as more demanding, less satisfying, and elicited more negative and less positive affect. In a follow-up study (scenario experiment, N = 113, 28% male), we showed that feedback recipients indeed judged the feedback giver to be less warm and less competent after receiving negative feedback which provides support for our assumption of anticipated face threat. Our results might explain why managers and/or colleagues in organizations are often reluctant to give negative feedback.

Chapter 5 then summarizes the main results and contributions of the empirical studies presented in Chapters 2 to 4. We will then discuss theoretical and practical implications, and directions for future research.

2 Does it Pay to Appreciate? An Empirical Test and Theoretical Explanation for the Positive Effects of Perceived Appreciation at Work

"A person who feels appreciated will always do more than what is expected" (Anderson, 2015). This quote, accredited to an unknown source, reflects the popularity of the concept of appreciation in the workplace. In popular media and social networks, appreciation of employees is portrayed to be powerful in promoting a host of desirable work outcomes. For example, a posting on a well-known social network site encourages to "show your employees appreciation and increase productivity!" (ExtraMadness, 2014). Likewise, the well-known online encyclopedia, *Wikipedia*, under the heading of U.S.'s and Canada's employee appreciation day ("Employee Appreciation Day," 2017), claims that "showing employees appreciation can result in a company's higher retention rate, not only increasing the productivity of employees but the company as a whole." These far-reaching claims about the power of appreciation intuitively seem to make sense—after all, feeling appreciated should be motivating to employees who then turn this increased motivation into higher productivity. Yet, to our knowledge, no empirical research backs these claims. Moreover, from decades of research on job satisfaction, scholars of organizational behavior and psychology are well aware that seemingly obvious relationships (in this case between job satisfaction and productivity) are often more complex and weaker in reality than may be expected (Locke, 1970; Judge, Thoresen, Bono, & Patton, 2001). A prudent approach therefore is to scrutinize the purported beneficial effect of appreciation by testing it empirically.

Accordingly, the main purpose of our research is to test the effect of perceived appreciation of employees on work outcomes and to delineate a theoretical mechanism underlying this effect. We base our argumentation on social exchange theory and propose that when employees feel appreciated for their work, they will tend to reciprocate by exhibiting behaviors that benefit the organization. As outcomes of this social exchange, we consider increased motivation (i.e., work engagement) and extra-role performance (i.e., organizational citizenship behavior). Second, we show that perceived appreciation is not redundant with but explains unique variance over and above leader-member exchange and perceived organizational support, which are two related but distinct concepts that have been linked to social-exchange processes in organizations. Third, we show that positive reciprocity norms

moderate the effect of perceived appreciation on work outcomes which provides a stronger test of the proposed theoretical mechanism. Fourth, we introduce feedback environment as a contextual variable antecedent to perceived appreciation and test mediational effects. Altogether, we seek to contribute to the literature by linking the popular construct of appreciation in the workplace with existing theory and research on related constructs and by testing a theoretical mechanism that involves feedback environment, appreciation, and work outcomes. Our conceptual model, which we develop in the next sections, is depicted in Figure 1.

2.1 Appreciation and Social Exchange

We define appreciation as a general feeling of being acknowledged at work (cf. Semmer & Jacobshagen, 2003; Stocker, Jacobshagen, Semmer, & Annen, 2010). At work, employees may feel appreciated if they perceive their performance to be respected and recognized or, more broadly, if they perceive to be respected and recognized as a person. As an example, employees may feel appreciated when receiving praise for good performance or when their thoughts and opinions about work-related issues are considered in an organization. Appreciation appears to have some similarity with the concept of unconditional positive regard, which describes an attitude of caring and acceptance irrespective of a person's behavior (APA dictionary of psychology, 2015). Against this background, it may come as no surprise that previous research on appreciation in the workplace primarily focused on health-related outcomes and well-being. For example, Stocker and colleagues (2010) found a positive correlation between appreciation and job satisfaction and a negative correlation with feelings of resentment in a military sample. In a diary study, appreciation was positively related to serenity (Stocker, Jacobshagen, Krings, Pfister, & Semmer, 2014). In the present research, we posit effects of appreciation in the workplace on more behavioral and attitudinal work outcomes and we base this prediction on social exchange theory.

Social exchange theory postulates that in interdependent social relationships, the parties involved engage in a series of interactions that follow certain rules of exchange. One of the most prominent rules of exchange is the rule of reciprocity (Blau, 1964; Cropanzano & Mitchell, 2005; Gouldner, 1960), which denotes that if one party supplies a benefit, the other party should respond or repay this benefit in kind. A central assumption related to the rule is that a person who received positive treatment will experience feelings of obligation and indebtedness towards the giving party and that these aversive feelings can be reduced best by

reciprocating (Settoon, Bennett, & Liden, 1996). A number of tangible and intangible resources that can be exchanged in social interactions have been proposed (e.g., money, information, love, status; Foa & Foa, 1980). According to Cropanzano and Mitchell (2005), these resources can be grouped into economic (e.g., monetary) and socioemotional resources. Socioemotional resources address a person's social and esteem needs and "send the message that a person is valued and/or treated with dignity" (p. 881). We suggest that appreciation reflects this feeling of being valued and treated with dignity. Appreciation functions as a socioemotional resource that the organization gives to the employee, which in turn creates feelings of obligation in the employee. The employee will then strive to reduce these feelings of obligation by demonstrating reciprocal behaviors that benefit the organization.

Social exchange theory is not very specific about the exact nature of the resources or behaviors that employees will return, although it states that "items being transacted should be as similar as possible" (Cropanzano et al., 2017, p. 500). In particular, positive behaviors will be returned with positive behaviors (e.g., helping), and negative behaviors will be returned with negative behaviors (e.g., counterproductive work behavior). This principle has been termed *homeomorphic reciprocity* (Cropanzano et al., 2017; Gouldner, 1960; Lyons & Scott, 2012). Consistent with this principle, we focus on positive work outcomes, because appreciation is a positive concept. Specifically, we suggest that increased effort and energetic behavior (i.e., work engagement; Schaufeli, Salanova, Gonzalez-Romá, & Bakker 2002) and extra-role performance (i.e., organizational citizenship behavior; Organ, Podsakoff, & MacKenzie, 2006) constitute ways in which employees can reciprocate their organization's goodwill which was expressed as appreciation (similar outcome variables have been considered in previous research on social exchange in organizations; e.g., Maslyn & Uhl-Bien, 2001; Masterson, Lewis, Goldman, & Taylor, 2000; Moorman, 1991; Settoon et al., 1996; Wayne, Shore, & Liden, 1997; for an overview see Cropanzano et al., 2017; Cropanzano & Mitchell, 2005). At this point, we hypothesize:

> *Hypothesis 1:* Perceived appreciation has a positive effect on (a) work engagement and (b) organizational citizenship behavior.

The idea that employees demonstrate organizationally beneficial behavior in return for favorable treatment by the organization (i.e., social exchange) is not new, but a number of social-exchange constructs have been proposed in the literature, among them perceived organizational support (POS) and leader-member exchange (LMX) (termed *Model 1* by

Cropanzano & Mitchell, 2005). POS refers to employees' global beliefs concerning the extent to which the organization values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). LMX describes the quality of the individual exchange relationship between supervisors and employees (Graen & Uhl-Bien, 1995; Uhl-Bien, Graen, & Scandura, 2000). Both constructs have been shown to predict organizational outcomes such as in-role behavior, extra-role behavior, job satisfaction, and organizational commitment (Cropanzano & Mitchell, 2005; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Eisenberger et al., 1986; Eisenberger, Cummings, Armeli, & Lynch, 1997; Ilies, Nahrgang, & Morgeson, 2007; Masterson et al., 2000; Settoon et al., 1996; Wayne et al., 1997).

We concede that perceived appreciation shares conceptual similarities with POS and LMX—an employee with a positive perception of POS and LMX will likely also feel appreciated at work. Still, we assume that appreciation is a distinguishable concept and that its prediction of work outcomes is not solely based on redundancies with POS and LMX. Appreciation refers to an employee's very experience of being appreciated and valued as a person at work. This subjective experience is different from the perception of an employee who is being supported by the organization (i.e., POS). It is also different from LMX which explicitly emphasizes the quality of the supervisor-subordinate dyad. In line with our assumption, we expect appreciation to add unique variance in predicting work outcomes over and above POS and LMX. Including POS and LMX as predictors also addresses the problem that omission of related variables "may lead researchers to find significant relationships that would not otherwise exist if the omitted variable were included" (Masterson et al., 2000, p. 738).

> *Hypothesis 2:* Perceived appreciation has a positive effect on (a) work engagement and (b) organizational citizenship behavior over and above POS and LMX.

2.2 Positive Reciprocity Norms as a Moderator

Although social exchange and reciprocity are considered to be universal principles (Cropanzano & Mitchell, 2005; Gouldner, 1960), individual differences concerning the degree to which people affirm social exchange and reciprocity exist (Cotterell, Eisenberger, & Speicher, 1992; Cropanzano & Mitchell, 2005; Shore & Coyle-Shapiro, 2003) and moderate reciprocating responses to favorable treatment (e.g. Cotterell et al., 1992; Coyle-Shapiro, 2002;

Eisenberger et al., 1986; Ladd & Henry, 2000). Positive reciprocity norms describe the extent that people keep score of exchange events because of the strong belief that good treatment should be positively repaid (Cropanzano & Mitchell, 2005; Eisenberger et al., 1986; Eisenberger, Lynch, Aselage, & Rohdieck, 2004; Uhl-Bien & Maslyn, 2003).

Positive reciprocity norms should moderate the effects of perceived appreciation on work outcomes. Employees with high positive reciprocity norms carefully monitor all the positive treatments and favors they receive to appropriately repay them. They should, therefore, respond more directly to high or low levels of perceived appreciation with correspondingly high or low levels of work engagement and organizational citizenship behavior. In contrast, employees with lower positive reciprocity norms do not keep score of favors and positive treatments as carefully as employees with high positive reciprocity norms. They should, therefore, not respond as similarly and immediately to high or low levels of perceived appreciation with work engagement or organizational citizenship behavior as do employees with high positive reciprocity norms (i.e., weaker effect of perceived appreciation on work outcomes in individuals low in positive reciprocity norms). It should be noted that if the effect of appreciation on work outcomes were to be greater in individuals with a high positive reciprocity norms, the result would provide a stronger test of the proposed mechanism of reciprocity and social exchange. In sum, we hypothesize:

> *Hypothesis 3:* Positive reciprocity norms moderate the effect of perceived appreciation on (a) work engagement and (b) organizational citizenship behavior such that the effect of perceived appreciation on work outcomes is stronger for employees with high positive reciprocity norms.

2.3 Feedback Environment as Antecedent of Perceived Appreciation

Organizations can express appreciation towards their employees in several ways. For example, formal recognition of employee performance may increase perceived appreciation of employees (although Feys, Anseel, and Wille (2013) recently discussed the undesired side effects on fellow employees who do not receive the recognition). Another way to convey appreciation may be to simply thank employees. Expressed gratitude can raise recipients' feeling of being socially valued which in turn can increase their prosocial behavior (Grant & Gino, 2010). In the present research, instead of examining main effects of specific behaviors (e.g., thanking an employee), we propose a more general contextual variable describing the

work environment as an antecedent of perceived appreciation, which has been referred to in the literature as the feedback environment of an organization.

The feedback environment of an organization comprises "contextual aspects of day-to-day (…) feedback processes" (Steelman, Levy, & Snell, 2004, p. 166). These feedback processes may involve supervisor-subordinate and peer relationships, with the former often being considered to be more essential (Anseel & Lievens, 2007; Gabriel, Frantz, Levy, & Hilliard, 2014; Norris-Watts & Levy, 2004; Sparr & Sonnentag, 2008). Several facets of feedback environment have been investigated, such as the availability of feedback, the credibility of the feedback source, the quality of the feedback, and promotion of feedback seeking (Steelman et al., 2004). These facets together constitute the feedback environment that has been proposed to affect work outcomes such as OCB, job satisfaction, and in-role performance (e.g., Anseel & Lievens, 2007; Norris-Watts & Levy, 2004; Peng & Chui, 2010; Rosen, Levy, & Hall, 2006; Whitaker et al., 2007).

The mechanism underlying the effect of feedback environment may reside in the informational aspect of the feedback and in its meaning for social exchange. The informational aspect may be one of the factors, because, for example, credible high-quality feedback contributes to a better understanding of the task requirements, which in turn improves in-role performance (Rosen et al., 2006; Whitaker et al., 2007). Social exchange may be a factor, because "perceptions of a more favorable feedback environment may lead employees to perceive that the organization values them" (Norris-Watts & Levy, 2004, p. 354; see also Steelman et al., 2004). In other words, a favorable feedback environment may increase perceived appreciation in employees who in turn will reciprocate this favorable treatment with greater effort and performance. We therefore expect perceived appreciation to mediate effects of feedback environment on work outcomes.

Hypothesis 4: Feedback environment has a positive effect on (a) work engagement and (b) organizational citizenship behavior.

Hypothesis 5: Perceived appreciation mediates this positive effect of feedback environment on (a) work engagement and (b) organizational citizenship behavior.

Again, we expect the mediational effect of appreciation to remain stable when the related concepts POS and LMX are statistically controlled for. That is, despite the presumable overlap between the constructs, we propose that appreciation uniquely contributes to the

mediation effect.

Hypothesis 6: Perceived appreciation mediates the effect of feedback environment on (a) work engagement and (b) organizational citizenship behavior over and above POS and LMX.

2.4 Overview of the Present Research

We conducted two studies to test our hypotheses. Study 1 was a cross-sectional online-survey which we conducted to test whether a) perceived appreciation, leader-member exchange, and perceived organizational support are distinct constructs, b) perceived appreciation positively relates to work engagement and to organizational citizenship behavior (Hypothesis 1), c) these relationships remain stable when leader-member exchange and perceived organizational support are considered (Hypothesis 2), and d) positive reciprocity norms moderate the effect of perceived appreciation on work outcomes (Hypothesis 3). Study 2 was an online-survey with two times of measurement which we conducted to replicate these effects longitudinally (Hypotheses 1 and 2). Further, in Study 2 we c) introduce the feedback environment as contextual variable antecedent to perceived appreciation and test for mediation effects (Hypotheses 5 and 6).

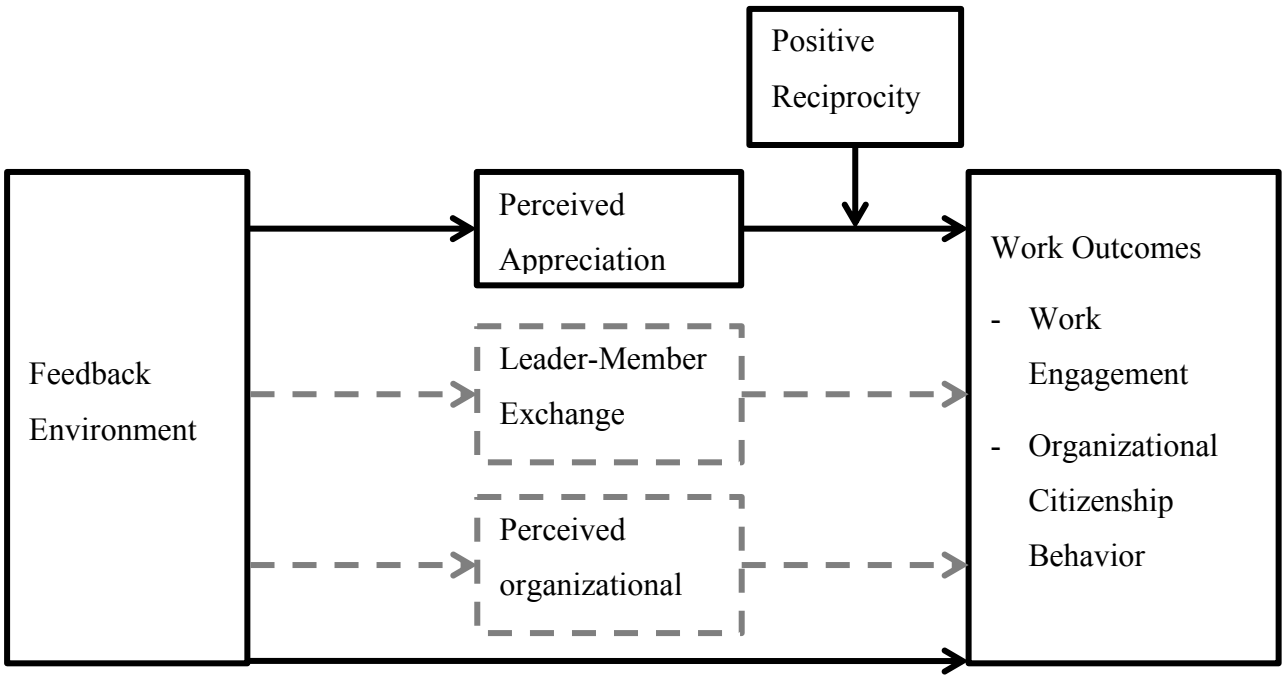

Figure 1. Theoretical model of the present study with perceived appreciation as focal mediator.

Dashed lines symbolize an augmentational effect of perceived appreciation (over and above leader-member exchange and perceived organizational support).

2.5 Method

2.5.1 Participants and procedure

Study 1 was a cross-sectional online-survey which was posted on the crowdsourcing platform *clickworker* (a German equivalent to Amazon MTurk). Participants were paid 1.80€ (approx. 2.00$) each for their participation. In total, 203 participants working in different organizations completed the online-survey. Of the 203 participants, 20 participants were excluded due to careless response behavior (Meade & Craig, 2012; e.g., repeatedly failing to recognize inverted items). Of the 183 participants in the final sample, 53% were female and the mean age was 41.68 years (*SD* = 12.10 years). Average tenure in the company was 9.35 years (*SD* = 9.31) and average professional/work experience was 15.44 years (*SD* = 12.31 years), with 62.2% of all participants having a permanent position. Less than a third of the sample (31.1%) had a college or university degree and 26.8% had leadership experience (years of leadership experience *M* = 9.22, *SD* = 8.14; span of control *M* = 14.76, *SD* = 42.85). Participation was voluntary at all times. Demographic questions were completed at the beginning of the survey, followed by the predictors perceived appreciation, leader-member exchange, perceived organizational support, and the moderator positive reciprocity norms. The dependent variables were completed at the end of the survey. After completing the questionnaire, participants were thanked and asked whether they were interested in the results (in this case, they were asked to enter their e-mail address which was stored independently of all data).

Study 2 was an online-survey with two times of measurement (T1 and T2) that were approximately six weeks apart. In total, 207 employees working in different organizations completed the T1 online-survey. As an incentive, for each participant completing both the T1 and the T2 online-survey, 0.20€ (approx. 0.25$) were donated to a charitable organization and a gift card of an online retailer (value 50€) was raffled among all participants. Of the 207 participants at T1, 117 completed the online-survey at T2 which corresponds to a drop-out rate of 43%. Of the 117 participants who completed both T1 and T2 surveys, 68.4% were female and the mean age was 33.88 (*SD* = 13.07). Average tenure in the company was 8.03 years (*SD* = 10.36) and average professional/work experience was 11.92 years (*SD* = 12.93), with 58.1%

of all participants having a permanent position. Less than half of the sample (43.6%) had a college or university degree and 23.1% had leadership experience (years of leadership experience $M = 10.63$, $SD = 11.17$; span of control $M = 12.93$, $SD = 16.85$). Participation was voluntary at all times. Participants created a personal code at the beginning of the T1 questionnaire which facilitated the matching of both times of measurement. In addition, they provided their e-mail address that was saved independently of all other data to simplify contact at T2. Demographic questions and the feedback environment measure (predictor) were included in the T1 questionnaire. The mediators perceived appreciation, leader-member exchange, and perceived organizational support were assessed at T2. The dependent variables were included in both the T1 and the T2 questionnaire, so that the effect of the dependent variable at T1 could be statistically controlled for. After completing the two online questionnaires, participants were thanked and asked whether they were interested in the results and whether they wanted to participate in the raffle.

2.5.2 Measures

2.5.3 Dependent variables

Work engagement. We measured work engagement with the nine-item short version of the Utrecht Work Engagement Scale (UWES, Schaufeli & Bakker, 2003; Schaufeli, Bakker & Salanova, 2006). Participants rated the extent to which they felt energetic and immersed at work over the past four weeks on a 7-point scale ranging from (1) never to (7) always. A sample item is "At my work, I feel bursting with energy." Cronbach's alpha was .97 in Study 1, .95 at T1, and .96 at T2 in Study 2, respectively.

Organizational citizenship behavior. We measured organizational citizenship behavior (OCB; Williams & Anderson, 1991) in Study 1 with five items of the OCB-individual measure (sample item: "I helped others who have been absent") and six items of the OCB-organizational measure (sample item: "My attendance at work is above the norm"). In Study 2, we measured OCB with five items of the organizational citizenship behavior-individual measure and three items of the organizational citizenship behavior-organizational measure. Participants rated the extent to which the described behavior corresponded to their own behavior shown over the past four weeks on a 5-point scale ranging from (1) *doesn't apply at all* to (5) *entirely applies*. Cronbach's alpha was .73 in Study 1, .71 at T1, and .77 at T2 in Study 2, respectively.

2.5.4 Predictors and mediators

Perceived appreciation. We developed a measure of perceived appreciation at work consisting of 12 items based on theoretical considerations and interviews with position experts. Participants rated the extent to which they felt appreciated at their workplace on a 5-point scale ranging from (1) *doesn't apply at all* to (5) *entirely applies*. A sample item is "At my workplace I am appreciated for my performance." The items are included in Table 1. In addition, we included ten items used by Stocker et al. (2010) to measure appreciation at work. Participants rated the extent of perceived appreciation at work on a 5-point scale ranging from (1) *doesn't apply at all* to (5) *entirely applies* (Study 1) or a 7-point scale ranging from (1) *doesn't apply at all* to (7) *entirely applies* (Study 2). In case of Study 2, we used linear transformation (Byrne, Peters, & Weston, 2016; Colman, Norris, & Preston, 1997) to change the 7-point scale to the 5-point scale to match the self-developed items. A sample item is "My colleagues ask me for advice and that shows me that they appreciate my opinion." Cronbach's alpha of the total measure was .96 and .93 in Studies 1 and 2, respectively.

Leader-member exchange. We measured the quality of leader-member exchange (LMX) with a German version of the seven-item measure developed by Graen and Uhl-Bien (1995; Schyns, 2002). Participants rated the quality of the relationship with their supervisor on a 5-point scale ranging from (1) *rarely/not at all/none/strongly disagree/extremely ineffective* to (5) *very often/fully/very high/strongly agree/extremely* effective. A sample item is "How well does your leader understand your job problems and needs?" Cronbach's alpha was .91 and .93 in Studies 1 and 2, respectively.

Perceived organizational support. We measured perceived organizational support with a German version of the 16-item short form of the survey of perceived organizational support (POS; Eisenberger, Huntington, Hutchison, & Sowa, 1986). Participants rated the extent to which they felt supported on a 7-point scale ranging from (1) *strongly disagree* to (7) *strongly agree*. A sample item is "My organization tries to make my job as interesting as possible." Cronbach's alpha was .97 and .95 in Studies 1 and 2, respectively.

Feedback environment. We measured feedback environment with the supervisor component of the Feedback Environment Scale (FES, Steelman et al., 2004; cf. Anseel & Lievens, 2007; Gabriel et al., 2014). We applied the slightly shortened 24-item German version by Sparr and Sonnentag (2008) representing five of the seven subscales of the FES (e.g., quality

of feedback, credibility of feedback source). We omitted two subscales, favorable feedback and unfavorable feedback, to focus more strongly on qualitative aspects of the feedback environment (see also Spar & Sonnentag, 2008). Participants rated their level of agreement on a 7-point scale ranging from (1) *strongly disagree* to (7) *strongly agree*. A sample item is "My supervisor is generally familiar with my performance on the job." Cronbach's alpha was .93.

2.5.5 Moderator variable

Positive reciprocity norms. We measured positive reciprocity norms with a German version of the ten-item measure developed by Eisenberger and colleagues (2004). Participants rated the extent to which they agreed to the statements on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree*. A sample item is "If someone does me a favor, I feel obligated to repay them in some way." Cronbach's alpha was .86.

Table 1

Perceived Appreciation Items

To what extent do the following statements apply to your workplace?	
At my workplace my personal needs are respected.	
My supervisor believes in my abilities and skills.	
My supervisor respects my interests when making decisions.	
I feel taken seriously by my colleagues at my workplace.	
Successes are appropriately appreciated by the company.	
At my workplace my feelings are taken into account.	
At my workplace I am appreciated as an employee.	
At my workplace I am appreciated for my performance.	
At my workplace my ideas and proposals are taken into account.	
My efforts are taken for granted.	(r)
My supervisor hardly pays attention to my work.	(r)
I get praised for good performance.	

Note. (r) = reverse coded.

Table 2

Study 1 Means, Standard Deviations, and Intercorrelations of Study Variables

	M	*SD*	1	2	3	4	5	6	7	8
Demographic variables										
1. Gender	1.47	0.50	-							
2. Age	41.68	12.10	.12	-						
Predictors										
3. Perceived appreciation	3.56	0.74	-.07	.11	(.96)					
4. Leader-member exchange	3.47	0.79	-.11	.07	.85**	(.91)				
5. Perceived organizational support	4.50	1.31	-.15*	.07	.81**	.78**	(.97)			
Dependent variables										
6. Work engagement	4.56	1.43	-.01	.24**	.61**	.55**	.55**	(.97)		
7. Organizational citizenship behavior	3.95	0.48	-.16*	.23**	.46**	.42**	.40**	.54**	(.73)	
Moderator										
8. Positive reciprocity norms	3.55	0.61	-.07	-.12	-.07	-.10	-.10	-.14	0.12	(.86)

Note. $N = 183$; Gender is coded as 1 = female, 2 = male. Where applicable, Cronbach's alpha is reported in parentheses in the diagonal.

* $p < .05$, ** $p < .01$.

Table 3

Study 2 Means, Standard Deviations, and Intercorrelations of Study Variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10
Demographic variables												
1. Gender	1.32	0.48	-									
2. Age	33.88	13.07	.19*	-								
Predictor (T1) and mediators (T2)												
3. Feedback environment (T1)	5.04	1.00	-.02	-.08	(.93)							
4. Perceived appreciation (T2)	3.66	0.62	-.05	-.12	.69**	(.93)						
5. Leader-member exchange (T2)	3.46	0.83	-.06	-.18	.75**	.80**	(.93)					
6. Perceived organizational support (T2)	4.50	1.18	-.02	.00	.43**	.53**	.47**	(.95)				
Dependent variables												
7. Work engagement (T1)	4.83	1.25	.15	.20*	.43**	.53**	.45**	.42**	(.95)			
8. Organizational citizenship behavior (T1)	4.12	0.56	-.35**	-.01	.11	.18	.18	-.01	.16	(.71)		
9. Work engagement (T2)	4.73	1.35	.14	.11	.45**	.62**	.49**	.42**	.80**	.10	(.96)	
10. Organizational citizenship behavior (T2)	4.06	0.57	-.22*	-.06	.30**	.39**	.32**	.06	.28**	.57**	.37**	(.77)

Note. $N = 117$; Gender is coded as 1 = female, 2 = male. Where applicable, Cronbach's alpha is reported in parentheses in the diagonal.

* $p < .05$, ** $p < .01$.

2.6 Results

Means, standard deviations, and correlations of study variables in Studies 1 and 2 are shown in Tables 2 and 3, respectively. As expected, there was an overlap among perceived appreciation, leader-member exchange, and perceived organizational support in both studies, with medium to large intercorrelations (range .78 to .85 in Study 1, range .47 to .80 in Study 2). Perceived appreciation shared significant correlations with both dependent variables in Studies 1 and 2. The other predictors also had several significant correlations with some of the dependent variables in both studies.

In Study 1, we found small correlations between gender and perceived organizational support and the dependent variable OCB as well as between age and both dependent variables. In Study 2, we found small correlations between gender and the dependent variable OCB as well as between age and the dependent variable work engagement. Hence, we reran all analyses pertaining to hypotheses with these variables as additional statistical controls. The results remained stable and we therefore report our findings without these controls in the following sections.

2.6.1 Confirmatory factor analyses

We first sought to test our assumption that the focal construct perceived appreciation is distinct from leader-member exchange and perceived organizational support. Therefore, we conducted a confirmatory factor analysis and tested a three-factor measurement model with the Study 1 data. We followed recommendations to use item parcels as indicators to reduce model complexity (Bandalos & Finney, 2001; Little, Cunningham, Shahar, & Widaman, 2002; Little, Rhemtulla, Gibson, & Schoemann, 2013). We used an item-to-construct balance approach to build the parcels of the three constructs perceived appreciation, LMX, and POS (Little et al., 2002). Following this item-to-construct balance approach, we anchored the parcels using the items with highest factor loadings in exploratory factor analysis and then added the other items in order to achieve parcels which are balanced regarding factor loading. More specifically, perceived appreciation and POS were indicated by four parcels each, and LMX was indicated by two parcels. The three-factor model fit the data well ($\chi^2_{(32)} = 40.22$, $p = .15$, CFI = .997, TLI = .995, RMSEA = .037, SRMR = .015) and better than a one-factor model ($\chi^2_{(35)} = 409.17$, $p < .001$, CFI = .852, TLI = .809, RMSEA = .242, SRMR = .057). The Chi square difference test further supported this ($\Delta\chi^2_{(3)} = 368.95$, $p < .001$). The factor loadings of the parcels on the latent

variables ranged from .89 to .96 (perceived appreciation: .93 - .96, LMX: .89 - .93, POS: .92 - .95).

In Study 2, we again conducted a confirmatory factor analysis to test the three-factor measurement model. We used the same item parcels as in Study 1 (cf. Little et al., 2013). The three-factor model fit the data adequately ($\chi^2_{(32)}$ = 61.87, p < .01, CFI = .977, TLI = .968, RMSEA = .089, SRMR = .046) and better than a one-factor model ($\chi^2_{(35)}$ = 526.14, p < .001, CFI = .627, TLI = .520, RMSEA = .346, SRMR = .174). The Chi square difference test further supported this ($\Delta\chi^2_{(3)}$ = 464.28, p < .001). The factor loadings of the parcels on the latent variables ranged from .87 to .95 (perceived appreciation: .87 - .93, LMX: .94 - .95, POS: .91 - .94). In sum, the results in both studies support our proposition that perceived appreciation is distinct from leader-member exchange and perceived organizational support.

2.6.2 Effect of perceived appreciation on work outcomes

Hypothesis 1 predicted an effect of perceived appreciation on the dependent variables (a) work engagement and (b) OCB. We tested this hypothesis using data from both studies. We computed separate linear regression models for each dependent variable with perceived appreciation as the predictor and, in case of Study 2, the dependent variable at T1 as the control variable. In support of Hypotheses 1a and 1b, we found a positive effect of perceived appreciation on work engagement and on OCB in both studies. In Study 1, as displayed in Table 4 (Model 1), there was a positive effect of perceived appreciation on work engagement (β = .61, p < .001, R^2 = .37) and on OCB (β = .46, p < .001, R^2 = .21). In Study 2, as displayed in Table 5 (Model 1), there was a positive effect of perceived appreciation on work engagement (β = .27, p < .01) and on OCB (β = .30, p < .01).

Hypothesis 2 predicted the effect of perceived appreciation on the dependent variables to remain stable when POS and LMX are statistically controlled for. We tested this hypothesis using data from both studies. We computed separate hierarchical linear regression models for each dependent variable with perceived appreciation as the predictor entered after POS and LMX, and, in case of Study 2, the dependent variable at T1 as the control variable. In support of Hypotheses 2a and 2b, we found a positive effect of perceived appreciation on work engagement and on OCB in both studies. In Study 1, as displayed in Table 4 (Model 2), there was a positive effect of perceived appreciation on work engagement (β = .45, p < .01) and on OCB (β = .37, p < .05) when POS and LMX were included. In Study 2, as displayed in Table

5 (Model 2), there was a positive effect of perceived appreciation on work engagement (β = .32, $p < .01$) and on OCB (β = .39, $p < .01$) when POS, LMX, and the dependent variable at T1 were included.

Due to the high intercorrelations between the three focal constructs, we cannot exclude that the results obtained with hierarchical regression analysis are distorted because of multicollinearity. Therefore, we additionally conducted relative weight analyses for both dependent variables work engagement and OCB using data from both studies (Johnson, 2000; Tonidandel & LeBreton, 2011). Relative weight analysis specifically addresses the problems associated with correlated predictors in multiple regressions by creating a new set of uncorrelated predictors which are maximally related to the original variables through orthogonal transformation (Tonidandel & LeBreton, 2011; for specific information on the calculation see also Johnson, 2000; Tonidandel, LeBreton, & Johnson, 2009). This procedure then calculates relative weights which reflect how much variance in the dependent variable is explained by each of the correlated predictors (Johnson, 2000; Tonidandel & LeBreton, 2011; Tonidandel et al., 2009). We inserted perceived appreciation, LMX, POS, and, in case of Study 2, the dependent variable at T1 as predictors. We used a bootstrapping procedure with 10.000 resamples to determine 95% confidence intervals (Tonidandel & LeBreton, 2015, Tonidandel et al., 2009). The results of the relative weight analysis paralleled the results obtained through regression analysis in both studies as perceived appreciation significantly predicted work engagement and OCB.

In Study 1, 38% of the variance in work engagement was explained by perceived appreciation, LMX, and POS. All three predictors significantly predicted work engagement, as none of the confidence intervals contained zero. The relative weight of perceived appreciation was 0.16 (95% CI: 0.09, 0.22; 42% of the total variance in work engagement). The relative weight of LMX was 0.11 (95% CI: 0.06, 0.16; 28% of the total variance in work engagement). The relative weight of POS was 0.11 (95% CI: 0.05, 0.17; 30% of the total variance in work engagement). For dependent variable OCB, the predictors perceived appreciation, LMX, and POS explained 22% of the variance. All three predictors significantly predicted OCB, as none of the confidence intervals contained zero. The relative weight of perceived appreciation was 0.09 (95% CI: 0.02, 0.15; 44% of the total variance in OCB). The relative weight of LMX was 0.06 (95% CI: 0.01, 0.11; 29% of the total variance in OCB). The relative weight of POS was 0.06 (95% CI: 0.01, 0.10; 27% of the total variance in OCB).

In Study 2, 70% of the variance in work engagement was explained by perceived appreciation, LMX, POS, and the dependent variable at T1. All three focal predictors significantly predicted work engagement, as none of the confidence intervals contained zero. The relative weight of perceived appreciation was 0.15 (95% CI: 0.09, 0.20; 21% of the total variance in work engagement). The relative weight of LMX was 0.07 (95% CI: 0.03, 0.13; 10% of the total variance in work engagement). The relative weight of POS was 0.05 (95% CI: 0.01, 0.11; 8% of the total variance in work engagement). The dependent variable at T1 was also a significant predictor with a relative weight of 0.42 (95% CI: 0.32, 0.54; 61% of the total variance in work engagement). For dependent variable OCB, the predictors perceived appreciation, LMX, POS, and the dependent variable at T1 explained 42% of the variance in OCB. Perceived appreciation and LMX significantly predicted work engagement, as the confidence intervals did not contain zero. The relative weight of perceived appreciation was 0.09 (95% CI: 0.03, 0.18; 22% of the total variance in OCB). The relative weight of LMX was 0.04 (95% CI: 0.01, 0.10; 10% of the total variance in OCB). POS was no significant predictor of organizational citizenship behavior because the confidence interval contained zero (relative weight 0.01; 95% CI: -0.02, 0.03; 2% of the total variance in OCB). The dependent variable at T1 was also a significant predictor with a relative weight of 0.28 (95% CI: 0.16, 0.41; 66% of the total variance in OCB).

In sum, the results of the relative weight analyses further support hypothesis 2a and 2b, as perceived appreciation explained a significant proportion of variance in work engagement and OCB when leader-member exchange and perceived organizational support (in Study 2 also the dependent variable at T1) were also taken into account. In addition, of the three predictors perceived appreciation, LMX, and POS, perceived appreciation had the highest relative weight in all analyses.

Table 4

Study 1 Results of the Hierarchical Regression Analyses Predicting Work Engagement and OCB

	Work engagement			Organizational citizenship behavior		
	B	*SE B*	β	*B*	*SE B*	β
Model 1						
Perceived appreciation	1.18	.11	.61***	0.30	.04	.46***
		R^2 = .37			R^2 = .21	
Model 2						
Step 1						
Leader-member exchange	0.55	.18	.31**	0.16	.07	.26*
Perceived organizational support	0.34	.11	.31**	0.07	.04	.20
		R^2 = .34			R^2 = .19	
Step 2						
Leader-member exchange	0.11	.21	.06	0.04	.08	.06
Perceived organizational support	0.15	.12	.14	0.02	.04	.06
Perceived appreciation	0.86	.24	.45**	0.24	.09	.37*
		R^2 = .38			R^2 = .22	
	ΔR^2 = .04**			ΔR^2 = .03*		
Model 3						
Perceived appreciation	1.14	.11	.59***	0.31	.04	.48***
Positive reciprocity norms	-0.19	.14	-.08	0.12	.05	.15*
Perceived appreciation x Positive reciprocity norms	0.43	.17	.15*	-0.04	.06	-.04
		R^2 = .40			R^2 = .24	

Note. N = 183.

* p < .05, ** p < .01.

Table 5

Study 2 Results of the Hierarchical Regression Analyses Predicting Work Engagement and OCB

	Work engagement T2			Organizational citizenship behavior T2		
	B	*SE B*	β	*B*	*SE B*	β
Model 1						
Step 1						
Dependent variable T1	0.86	.06	.80***	0.58	.08	.57***
		R^2 = .64			R^2 = .32	
Step 2						
Dependent variable T1	0.71	.07	.66***	0.53	.08	.51***
Perceived Appreciation	0.59	.13	.27***	0.28	.07	.30***
		R^2 = .69			R^2 = .41	
		Δ R^2 = .05***			Δ R^2 = .09***	
Model 2						
Step 1						
Dependent variable T1	0.77	.07	.71***	0.54	.08	.52***
Perceived organizational support	0.06	.07	.05	-0.02	.04	-.05
Leader-member exchange	0.23	.11	.15*	0.17	.06	.24**
		R^2 = .66			R^2 = .37	
		Δ R^2 = .02*			Δ R^2 = .05*	
Step 2						
Dependent variable T1	0.71	.07	.66***	0.51	.08	.50***
Perceived organizational support	0.00	.07	.00	-0.06	.04	-.13
Leader-member exchange	-0.10	.14	-.06	-0.02	.08	-.02
Perceived Appreciation	0.69	.20	.32**	0.36	.12	.39**
		R^2 = .70			R^2 = .42	
		Δ R^2 = .03**			Δ R^2 = .05**	

Note. N = 117.

* p < .05, ** p < .01, *** p < .001.

2.6.3 Positive reciprocity norms as moderator

Hypothesis 3 predicted that positive reciprocity norms moderate the effect of perceived appreciation on (a) work engagement and (b) OCB such that positive reciprocity norms increase the effect of perceived appreciation. We tested this hypothesis using data from Study 1, in which we had assessed this moderator variable. We computed two separate linear regression models for each dependent variable with perceived appreciation, positive reciprocity norms, and the interaction between perceived appreciation and positive reciprocity norms as predictors. The results are displayed in Table 4 (Model 3). In support of Hypothesis 3a, positive reciprocity norms moderated the effect of perceived appreciation on work engagement (β = .15, $p < .05$). As depicted in Figure 2, the effect of perceived appreciation on work engagement was stronger for employees with high positive reciprocity norms. However, contrary to Hypothesis 3b, positive reciprocity norms did not moderate the effect of perceived appreciation on OCB (β = -.04, p = .50).

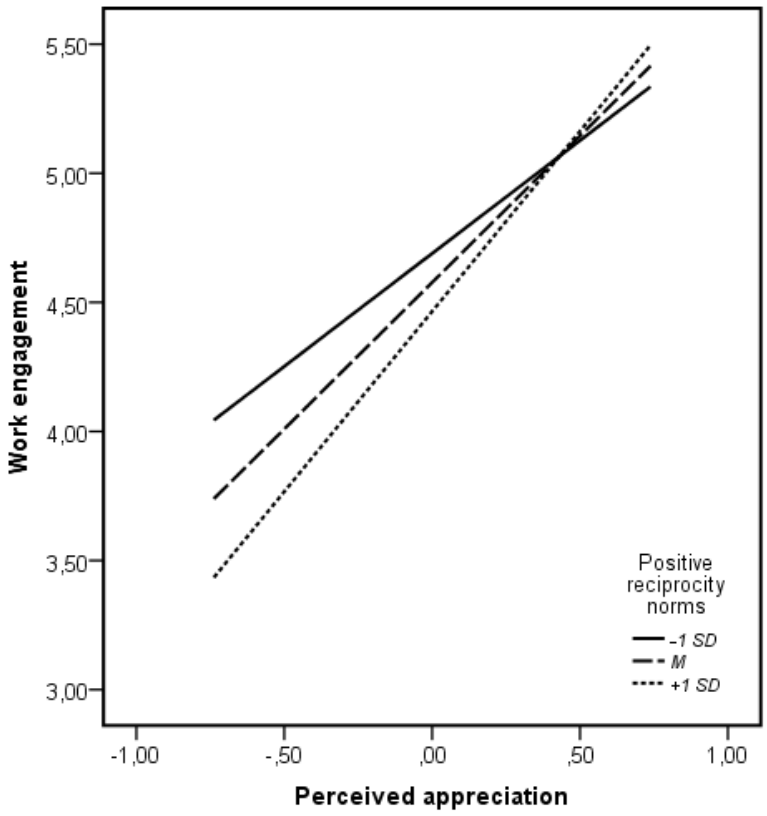

*Figure 2***.** Positive reciprocity norms as a moderator on the relationship between perceived appreciation and work engagement.

2.6.4 Effect of feedback environment on work outcomes

Hypothesis 4 predicted an effect of feedback environment on the dependent variables (a) work engagement and (b) OCB. We tested this hypothesis using data from Study 2. We computed two separate linear regression models for each dependent variable with feedback environment as the predictor and the dependent variable at T1 as the control variable. As displayed in Table 6 and in support of Hypotheses 4a and 4b, the results revealed a positive effect of feedback environment on work engagement ($\beta = .13$, $p < .05$) and on organizational citizenship behavior ($\beta = .18$, $p < .05$).

Table 6

Study 2 Results of the Linear Regression Analyses with Dependent Variables at T1 and Feedback Environment as Predictor

	Work engagement T2			Organizational citizenship behavior T2		
	B	*SE B*	β	*B*	*SE B*	β
Dependent variable T1	.81	.07	.75***	.57	.08	.55***
Feedback environment	.17	.08	.13*	.09	.04	.18*
		$R^2 = .65$			$R^2 = .37$	

Note. $N = 117$.

* $p < .05$, ** $p < .01$, *** $p < .001$.

2.6.5 Simple mediation models (with perceived appreciation as sole mediator)

Hypothesis 5 predicted the effect of feedback environment on the dependent variables (a) work engagement and (b) OCB to be mediated by perceived appreciation. We tested this hypothesis using data from Study 2 and computing two separate simple mediation models for the two dependent variables with feedback environment as the predictor, perceived appreciation as the mediator, and the dependent variable at T1 as the control variable. We used Preacher and Hayes's (2004) PROCESS macro for the bootstrapping method with 10,000 resamples and we estimated 95% bias-corrected confidence intervals for two-tailed testing. Results are displayed in Table 7 for work engagement and in Table 8 for organizational citizenship behavior.

Simple mediation model for work engagement. As expected, feedback environment positively affected perceived appreciation ($a = 0.35$, $p < .001$) and perceived appreciation

positively affected work engagement (b = 0.64, p < .001). In addition, there was no evidence that feedback environment had an effect on work engagement when perceived appreciation was included in the model (c' = -0.05, p = .61). The bias-corrected bootstrap confidence interval of the indirect effect (ab = 0.22) did not include zero (.1203 to .3541), indicating that appreciation mediated the relationship between feedback environment and work engagement. In sum, these results support Hypothesis 5a: The more favorable the feedback environment, the more the employees feel appreciated, which in turn leads to higher work engagement of employees (i.e., mediation effect of perceived appreciation).

Simple mediation model for organizational citizenship behavior (OCB). As expected, feedback environment positively affected perceived appreciation (a = 0.42, p < .001) and perceived appreciation positively affected OCB (b = 0.23, p < .05). In addition, there was no evidence that feedback environment affected OCB when perceived appreciation was included in the model (c' = 0.04, p = .55). The bias-corrected bootstrap confidence interval of the indirect effect (ab = 0.10) did not include zero (.0196 to .1730), indicating that appreciation mediated the relationship between feedback environment and organizational citizenship behavior. In sum, these results support Hypothesis 5b: The more favorable the feedback environment, the more the employees feel appreciated, which in turn leads to more OCB of employees (i.e., mediation effect of perceived appreciation).

Table 7

Study 2 Simple Mediation Model with Work Engagement (T2) as Dependent Variable and Perceived Appreciation as Mediator

	Criterion					
	Perceived appreciation			Work engagement (T2)		
Predictor	Coefficient	*SE*	*p*	Coefficient	*SE*	*p*
Feedback environment	0.35	.04	<.001	-0.05	.10	.61
Perceived appreciation	-		-	0.64	.16	<.001
Work engagement T1	0.14	.04	<.001	0.71	.07	<.001
Constant	1.21	.19	<.001	-0.80	.42	.06
		R^2 = .54			R^2 = .69	
	F (2, 114) = 86.71, p < .001			F (3, 113) = 92.52, p < .001		

Note. N = 117. Unstandardized regression coefficients and two-tailed p-values are reported. Bootstrap sample size = 10,000.

Table 8

Study 2 Simple Mediation Model with Organizational Citizenship Behavior (T2) as Dependent Variable and Perceived Appreciation as Mediator

	Criterion					
	Perceived appreciation			Organizational citizenship behavior (T2)		
Predictor	Coefficient	*SE*	*p*	Coefficient	*SE*	*p*
Feedback environment	0.42	.04	<.001	0.04	.06	.55
Perceived appreciation	-		-	0.23	.11	<.05
Organizational citizenship behavior T1	0.11	.07	.12	0.53	.09	<.001
Constant	1.08	.35	<.01	0.83	.47	.08
		$R^2 = .48$			$R^2 = .41$	
	F (2, 114) = 57.85, $p < .001$			F (3, 113) = 17.04, $p < .001$		

Note. $N = 117$. Unstandardized regression coefficients and two-tailed p-values are reported. Bootstrap sample size = 10,000.

2.6.6 Parallel mediation models (with perceived appreciation, pos, and lmx as mediators)

Hypothesis 6 predicted the mediation effect of perceived appreciation on (a) work engagement and (b) OCB to remain stable when additional mediational effects of leader-member exchange and of perceived organizational support are statistically controlled for. We tested for these mediation effects using data from Study 2 and computing two separate parallel mediation models for the two dependent variables with feedback environment as the predictor and the dependent variable at T1 as the control variable. Perceived appreciation, POS, and LMX were simultaneously entered as mediator variables (i.e., parallel mediation). Again, we used Preacher and Hayes's (2004) PROCESS macro for the bootstrapping method with 10,000 resamples and we estimated 95% bias-corrected confidence intervals for two-tailed testing. Results are displayed in Table 9 for work engagement and in Table 10 for organizational citizenship behavior.

Parallel mediation model for work engagement. As expected, feedback environment positively affected perceived appreciation ($a_1 = 0.35$, $p < .001$) and perceived appreciation positively affected work engagement ($b_1 = 0.70$, $p < .001$). Feedback environment also positively affected the potential mediators leader-member exchange ($a_2 = 0.57$, $p < .001$) and

perceived organizational support (a_3 = 0.37, p < .001). However, work engagement was not affected by the predictors LMX (b_2 = -0.08, p = .60) or POS (b_3 = 0.00, p = .95). These results are paralleled by the bias-corrected bootstrap confidence intervals of the indirect effects of perceived appreciation, LMX, and POS. For the indirect effect of perceived appreciation (a_1b_1 = 0.24), the interval did not include zero (.1260 to .3949), indicating that appreciation mediated the relationship between feedback environment and work engagement. However, for the indirect effect of LMX (a_2b_2 = -0.05) and of POS (a_3b_3 = 0.00), the intervals included zero (-.2178 to .1307 and -.0477 to .0618, respectively). In addition, there was no evidence of a direct effect of feedback environment on work engagement when all three mediators were included in the model (c' = -0.03, p = .82). In sum, these results support Hypothesis 6a, because the mediating effect of perceived appreciation remained stable when the other two potential mediators were statistically controlled.

Parallel mediation model for organizational citizenship behavior (OCB). As expected, feedback environment positively affected perceived appreciation (a_1 = 0.42, p < .001) and perceived appreciation positively affected organizational citizenship behavior (b_1 = 0.34, p < .05). Feedback environment also positively affected the potential mediators leader-member exchange (a_2 = 0.62, p < .001) and perceived organizational support (a_3 = 0.52, p < .001). However, OCB was not affected by LMX (b_2 = -0.06, p = .64) or by POS (b_3 = -0.07, p = .13). These results are paralleled by the bias-corrected bootstrap confidence intervals of the indirect effects of perceived appreciation, LMX, and POS. For the indirect effect of perceived appreciation (a_1b_1 = 0.14), the interval did not include zero (.0257 to .2531), indicating that appreciation mediated the relationship between feedback environment and OCB. However, the intervals included zero for the indirect effect of LMX (a_2b_2 = -0.04, -.1730 to .1071) and POS (a_3b_3 = -0.03, -.0917 to .0063). In addition, the analysis revealed no evidence of a direct effect of feedback environment on OCB when all three mediators were included in the model (c' = 0.07, p = .27). In sum, these results support Hypothesis 6b, because the mediating effect of perceived appreciation remained stable when the other two potential mediators were statistically controlled.

Table 9

Study 2 Parallel Mediation Model with Work Engagement (T2) as Dependent Variable and Perceived Appreciation, Leader-Member Exchange, and Perceived Organizational Support as Mediators

	Criterion							
	Perceived appreciation		Leader-member exchange		Perceived organizational support		Work engagement (T2)	
Predictor	Coefficient (*SE*)	*p*	Coefficient (*SE*)	*P*	Coefficient (*SE*)	*p*	Coefficient (*SE*)	*p*
Feedback environment	0.35 (.04)	<.001	0.57 (.06)	<.001	0.37 (.10)	<.001	-0.03 (.11)	.82
Perceived appreciation	-	-	-	-	-	-	0.70 (.18)	<.001
Leader-member exchange	-	-	-	-	-	-	-0.08 (.16)	.60
Perceived organizational support	-	-	-	-	-	-	0.00 (.07)	.95
Work engagement T1	0.14 (.04)	<.001	0.11 (.05)	<.05	0.28 (.10)	<.01	.71 (.07)	<.001
Constant	1.21 (.19)	<.001	0.07 (.34)	.83	1.33 (.46)	<.01	-0.87 (.43)	<.05
	$R^2 = .54$		$R^2 = .59$		$R^2 = .26$		$R^2 = .70$	
	F (2, 114) = 86.71, $p < .001$		F (2, 114) = 65.49, $p < .001$		F (2, 114) = 24.47, $p < .001$		F (5, 111) = 55.54, $p < .001$	

Note. Unstandardized regression coefficients and two-tailed *p*-values are reported. Standard errors (*SE*) of the regression coefficients are displayed in parentheses. Work engagement (T1) was inserted as statistical control. Bootstrap sample size = 10,000.

Table 10

Study 2 Parallel Mediation Model with Organizational Citizenship Behavior (T2) as Dependent Variable and Perceived Appreciation, Leader-Member Exchange, and Perceived Organizational Support as Mediators

	Criterion							
	Perceived appreciation		Leader-member exchange		Perceived organizational support		Organizational citizenship behavior (T2)	
Predictor	Coefficient (*SE*)	*P*	Coefficient (*SE*)	*p*	Coefficient (*SE*)	*p*	Coefficient (*SE*)	*p*
Feedback environment	0.42 (.04)	<.001	0.62 (.06)	<.001	0.52 (.10)	<.001	0.07 (.06)	.27
Perceived appreciation	-	-	-	-	-	-	0.34 (.16)	<.05
Leader-member exchange	-	-	-	-	-	-	-0.06 (.13)	.64
Perceived organizational support	-	-	-	-	-	-	-0.07 (.04)	.13
Organizational citizenship behavior T1	0.11 (.07)	.12	0.15 (.10)	.15	-0.12 (.19)	.52	.52 (.09)	<.001
Constant	1.08 (.35)	<.01	-0.25 (.53)	.63	2.39 (.91)	<.01	0.87 (.45)	.06
	R^2 = .48		R^2 = .58		R^2 = .19		R^2 = .42	
	F (2, 114) = 57.85, p < .001		F (2, 114) = 63.11, p < .001		F (2, 114) = 14.04, p < .001		F (5, 111) = 14.33, p < .001	

Note. Unstandardized regression coefficients and two-tailed *p*-values are reported. Standard errors (*SE*) of the regression coefficients are displayed in parentheses. Organizational citizenship behavior (T1) was inserted as statistical control. Bootstrap sample size = 10,000.

2.7 Discussion

In two studies we investigated whether the effects of the popular construct appreciation are as positive as commonly assumed. As a theoretical framework, we embedded perceived appreciation in social exchange theory and the norm of reciprocity. We expected employees who feel appreciated at work to return this goodwill with increased engagement and OCB. Consistent with our assumptions, perceived appreciation positively affected our two dependent variables in both studies, even after controlling for the stability of the dependent variables in Study 2 (Hypothesis 1). These results extend previous research which focused on the relationship between appreciation and well-being (Stocker et al., 2010; Stocker et al., 2014) by demonstrating effects on more behavior-based work outcomes. Moreover, perceived appreciation positively affected the dependent variables while controlling for the well-known social exchange mediators LMX and POS in both studies (Hypothesis 2). In other words, perceived appreciation explained unique variance in work outcomes that the related constructs LMX and POS did not account for. Positive reciprocity norms moderated the effect of perceived appreciation on work engagement (Hypothesis 3a) which further supports our proposition that social exchange and especially the norm of reciprocity theoretically explain why perceived appreciation has positive effects on work outcomes. Unexpectedly, however, positive reciprocity norms did not moderate the effect of perceived appreciation on OCB (Hypothesis 3b), suggesting that this relationship may need further investigation.

In addition, we replicate and extend research on feedback environment in Study 2. Feedback environment had a positive effect on work engagement and organizational citizenship behavior (Hypotheses 4a-b). The effect on OCB replicates longitudinally previous cross-sectional research (Norris-Watts & Levy, 2004; Peng & Chui, 2010). In addition, perceived appreciation mediated the positive relationship between feedback environment and work engagement as well as OCB (Hypothesis 5), explaining unique variance after controlling for LMX and POS (Hypothesis 6). Consistent with our assumption, the feedback environment acted as a contextual variable antecedent to perceived appreciation which in turn affected work outcomes engagement and OCB.

Our results imply that perceived appreciation can be viewed as a socioemotional resource that is exchanged at work. To restate the opening quote: It seems that an employee who feels appreciated will do more than what is expected (i.e., show engagement and OCB), because the perception of appreciation creates an obligation to reciprocate. In terms of practical

implications, interventions that foster and train appreciative behavior (e.g., of supervisors) should be implemented. Improving supervisors' appreciative behavior may set off self-reinforcing cycles of social exchanges at work (Cropanzano & Mitchell, 2005) which then contribute to favorable organizational outcomes.

Our findings further contribute to the understanding of the effects of a favorable feedback environment. We showed that social exchange and perceived appreciation constitute a mechanism by which feedback environment positively affects work engagement and organizational citizenship behavior. This also supports the suggestion that employees feel valued when they experience a favorable feedback environment (Norris-Watts & Levy, 2004). In terms of practical implications, this result offers insights into how we can foster the employee's perceived appreciation. A favorable feedback environment as antecedent of perceived appreciation can be a basis for interventions in organizations. Such an intervention should include training supervisors in providing informal feedback to subordinates.

2.7.1 Strengths and limitations

We conducted two independent studies and we consistently found positive effects of perceived appreciation on work engagement and OCB which can be considered a strength of our research. In particular, a strength of Study 2 is the longitudinal design with the statistical control of the dependent variables at T1. We embedded the popular construct appreciation in the well-established theoretical framework of social exchange theory (Cropanzano et al., 2017; Cropanzano & Mitchell, 2005) and we controlled for proven social exchange mediators POS and LMX when testing effects of our focal variable. Controlling for related variables provides a stronger test of the hypothesized relationships, because omitting highly related variables can lead to overestimated significant correlations that fail to represent the true relationships (Masterson et al., 2000).

However, there are also limitations to our studies. Our data in both studies were single-source and self-report which raises concerns of common method bias and potentially inflated correlations. For at least three reasons, however, we are confident that our research design is not deficient and does not distort our findings. First, several variables used in the two studies are measured appropriately via self-report (e.g., work engagement, perceived appreciation, feedback environment; cf. Chan, 2009; Conway & Lance, 2010). With regard to perceived appreciation and feedback environment, self-reports are appropriate because these variables

pertain to employees' individual perceptions at work. Further, self-reports of work engagement are justifiable because employees are most aware of the effort they put into work and how engaged they are at work. An ongoing discussion persists in the literature whether OCB should be measured via self- or other-rating. Some scholars argue that self-reported OCB is appropriate, because employees are likely to have more insight into their behavior (Allen, Barnard, Rush, & Russell, 2000; Carpenter, Berry, & Houston, 2014). In addition, meta-analytical results showed self- and other-ratings of OCB to display a similar pattern of relationships with known correlates of OCB (Carpenter et al., 2014). Second, several of our variables have been used in previous research and the correlations we found are within a similar range. Our correlations involving feedback environment were similar to those reported in other primary studies (Norris-Watts & Levy, 2004; Peng & Chui, 2010; Rosen et al. 2006; Whitaker et al., 2007), and our correlations involving POS and LMX were within the confidence intervals reported in meta-analyses of these constructs (Dulebohn et al., 2012; Kurtessis, Eisenberger, Ford, Buffardi, Stewart, & Adis, 2017). Based on these comparisons, there is no indication for inflated correlations in our data. This also indicates that the precautions we took to reduce socially desirable responding in both studies (e.g. repeatedly assuring participants' anonymity, see also Conway & Lance, 2010; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) encouraged honest response behavior. Third, in Study 2 we used two measurement occasions and statistically controlled for the dependent variables at T1, thereby partialling out common method variance. In sum, our results appear to be unbiased. Nevertheless, replication of our findings using multi-source data (e.g., supervisor ratings of dependent variables) and especially objective performance data would be desirable.

2.7.2 Future research

Our study is among the first to theoretically embed and empirically test effects and antecedents of perceived appreciation. Yet, numerous questions concerning perceived appreciation remain unanswered, which opens up new areas of future research. We suggest three promising areas of future research.

First, the identification of further antecedents of perceived appreciation seems a promising area of future research and is of high practical and theoretical importance. Specifically, the role of supervisors and managers for perceived appreciation needs to be better understood to develop interventions that enhance appreciative behavior. Different leadership styles and behaviors can strongly influence an employee's perceived appreciation.

Investigating these effects remains up to future research. Other potential antecedents of perceived appreciation are aspects of organizational climate and culture and specific measures such as formal employee recognition.

Second, another research question that needs to be investigated is the boundary condition of social exchange at work. Can there be too much appreciation and what effects does it have on employees? Too much appreciation could result in an obligation to reciprocate which is perceived as impossible to fulfill. An obligation perceived as impossible to fulfill could put strain on the employee, which would turn appreciation into a stressor at work instead of a resource.

Third, the consequences of a negative social exchange need to be explored in the context of perceived appreciation. Consequences of a negative social exchange could be either the retention of behavior that is beneficial to the organization or the exertion of behavior that is detrimental to the organization. Following the propositions by Cropanzano et al. (2017), a lack of appreciation can be categorized as low in hedonic value and activity. Given that employees are likely to reciprocate congruently according to the principle of *homeomorphic reciprocity* (Cropanzano et al., 2017), a lack of appreciation would result in the retention of desirable behavior (i.e., employees refrain from engaging in extra-role behavior). Moreover, an oppositional construct (Cropanzano et al. 2017) to appreciation could be disregard. Disregard, which is low in hedonic value but high in activity, should elicit an equivalent response of undesirable behavior (i.e., employees engage in counter-productive work behavior). Either way, a lack of appreciation or disregard could result in high costs for the organization.

3 Good News or Bad News First? Beginning a Feedback Message with Negative Feedback Leads to More Performance Improvement

Performance feedback is believed to be a powerful tool to improve performance in organizations (DeNisi & Kluger, 2000; Stahl, Björkman, Farndale, Morris, Paauwe, Stiles, & Wright, 2012). Intuitively, it makes sense to assume that feedback by some external agent (e.g., a manager, supervisor, or teacher) should improve performance, particularly on tasks that offer little task-inherent feedback on progress and quality of work (e.g., in knowledge-intensive work as opposed to handcraft). Yet, empirically, the evidence is not as unequivocal as may be expected. In their seminal work on effectiveness of feedback interventions, Kluger and DeNisi (1996) found that although on average the interventions improved performance, in as many as 40% of cases performance even deteriorated. These results led Kluger and Van Dijk (2005) to conclude that "feedback is like gambling in the stock exchange: on average, you gain, yet (…) you have a 40% chance of a (performance) loss following feedback" (p. vii). As of today, although there has been an active research on the topic of feedback, it is still safe to say that the perception, processing, and response to performance feedback is a complex process that can be affected by several characteristics of the feedback message and recipient (cf. Ilgen, Fisher, & Taylor, 1979; Smither, London, & Reilly, 2005).

Given the complexity and mixed results of feedback effects, it may come as no surprise that practical recommendations are often not very well grounded in existing theory and research. Also, some recommendations appear to focus primarily on how the feedback situation can be designed more comfortably, in the hope that this also boosts performance. This is understandable given that feedback situations tend to be stressful for recipients (Belschak & Den Hartog, 2009; Ilies, De Pater, & Judge, 2007) and that managers, too, often feel uncomfortable providing feedback and criticism to their employees (Rosen & Tesser, 1971). A well-known example for such a recommendation is the so-called feedback sandwich or sandwich technique that has long been popular (e.g., Dohrenwend, 2002). The feedback sandwich states that criticism (i.e., negative feedback) should be preceded by some positive feedback in order to soften the blow of the criticism that is yet to come. Yet, to our knowledge, systematic empirical tests of the proposed performance effect of such a feedback order is virtually non-existent (cf. Anseel, 2015). This lack of research is unfortunate given that

intuitively, an opposite prediction may be just as plausible, namely, that only if the negative feedback is painful enough to attract the receiver's attention (i.e., if negative feedback is *not* 'softened' by precedent positive feedback), performance improvement is likely to occur.

The present research seeks to add a piece to the puzzle of feedback effects. We focus on feedback order as a feedback characteristic that seems to be neglected in feedback research so far despite its high practical relevance. Although a number of studies looked at effects of providing either negative or positive feedback (e.g., Belschak & Den Hartog, 2009; Kluger & Van Dijk, 2004, 2011; Krenn, Würth, & Hergovich, 2013), in practice employee performance often involves both positive and negative aspects. Accordingly, providing either positive or negative feedback to employees often is not feasible. Rather, informing employees about both aspects, by providing positive and negative feedback, may better help to clarify what aspects of behavior should be improved (i.e., negative feedback) while others should be maintained (i.e., positive feedback). Besides effects of feedback order, we also include feedback specificity in our analyses, which is a feedback characteristic that has been part of both practical recommendations and of theoretical accounts of feedback effects (Ilgen et al., 1979; Kluger & DeNisi, 1996).

Our research builds on cybernetic theories of self-regulation (e.g., Bandura, 1991; Carver & Scheier, 1998; Lord, Diefendorff, Schmidt, & Hall, 2010; Neal, Ballard, &Vancouver, 2017), including Feedback Intervention Theory (Kluger & DeNisi, 1996) and action-regulation theory (Hacker, 1973; Frese & Sabini, 1985; Frese & Zapf, 1994; Zacher & Frese, 2018). We also refer to phenomena of memory distortion known from cognitive psychology, which we expect to be effective during feedback perception. In short, we will argue that performance improvement is most likely if the feedback message is not only specific but also begins with negative feedback (i.e., criticism) because only then will the feedback receiver perceive a performance-standard gap and an urgency to act in order to close this gap. In the following section, we will develop our assumptions in more detail.

3.1 Theoretical Background and Development of Hypotheses

Feedback involves "information regarding some aspect(s) of one's task performance" (Kluger & DeNisi, 1996, p. 255). The notion of feedback is incorporated in several theories that describe the regulation of human behavior, most notably theories of self-regulation (e.g., Bandura, 1991; Carver & Scheier, 1998; Frese & Zapf, 1994; Kanfer & Ackerman, 1989;

Locke & Latham, 1990; cf. Kanfer, Frese, & Johnson, 2017). If the feedback information is explicitly provided by some external agent (e.g., a manager, supervisor, teacher, or coach), this feedback may be termed augmented, external or extrinsic feedback. The act of providing external feedback constitutes a feedback intervention. *Feedback Intervention Theory* (FIT; Kluger & DeNisi, 1996, 1998) is a self-regulatory theory that explicitly focuses on this type of external feedback and how it affects learning and performance.

FIT comprises five propositions (Kluger & DeNisi, 1996, 1998) that have implications on how feedback should be designed to maximize performance improvement. (1) Behavior is regulated by comparisons of current performance with performance standards or goals (cf. Bandura,1991; Carver & Scheier, 1998). (2) Because attention is limited (cf. Atkinson & Shiffrin, 1968; Broadbent, 1958), only those performance-standard gaps that receive attention affect behavior regulation. (3) Feedback interventions influence the locus of attention and thereby affect behavior. In particular, (4) feedback interventions that direct attention to task-irrelevant processes (e.g., self-related meta-tasks) attenuate performance (cf. Kanfer & Ackerman, 1989); whereas (5) feedback interventions that direct attention to task-relevant processes enhance learning and performance, particularly if "coupled with information regarding erroneous hypotheses" (Kluger & DeNisi, 1996, p. 268). That is, performance is more likely to improve if the information contained in the feedback message helps in identifying what behaviors or behavioral changes may effectively reduce the performance-standard gap.

The present research is in line with propositions of FIT, but it places emphasis on some aspects within feedback processing that are not explicitly dealt with by FIT or that have not often been empirically tested. First, FIT starts with a performance-standard gap but does not account for potential systematic influences of objective feedback cues on the subjective perception or internal representation of the feedback. This subjective perception may have direct implications for the perception of the performance-standard gap and, in turn, for subsequent regulation of behavior. We propose that certain feedback cues systematically distort feedback perceptions which, in turn, affect regulation of attention and behavior. Second, FIT "lacks very detailed and specific predictions" and "runs the risk of being unfalsifiable (Kluger & DeNisi, 1996, p. 276). We derive specific predictions concerning two feedback cues, namely, feedback order and feedback specificity, and experimentally test their effect on performance improvement.

Our assumptions are best described with reference to a simple, schematic self-regulatory action cycle that starts with the feedback message and ends with (potential) performance improvement, as depicted in Figure 1. This action cycle is consistent with common theories of self-regulation (e.g., Bandura, 1991; Carver & Scheier, 1998; Frese & Zapf, 1994; Kluger & DeNisi, 1996), but it includes elements and puts emphasis on some aspects that we propose are critical when processing and responding to feedback information, as a special case of a self-regulatory action cycle. In this action cycle, we distinguish three different phases of feedback processing, namely, (1) a feedback perception phase, (2) a motivational phase, and (3) an action-regulation phase. In short, and as we shall describe in more detail below, we put forth the following key assumptions. First, the perception of the feedback is not an exact reflection of the objective feedback received but is distorted due to memory effects that occur during the feedback perception phase (Phase 1 in Figure 1). Second, perceived negativity of the feedback determines whether the actor will perceive a performance-standard gap and feel an urgency to take action to reduce the gap (motivational phase; Phase 2 in Figure 1). Finally, this felt urgency will lead to performance improvement if there is action-relevant information available (action-regulation phase; Phase 3 in Figure 1). We shall now describe these phases and the hypotheses that follow from our model.

3.1.1 Feedback perception phase

The feedback perception phase centers around the assumption that the subjective perception or internal representation of feedback is not a mere reflection of the objective feedback message (cf. Ilgen et al., 1979). Rather, the subjective perception of feedback is distorted due to limited attention when receiving feedback (Kluger & DeNisi, 1996). Attention during feedback reception is not only limited due to general constraints on human attentional capacities (cf. Broadbent, 1958; Atkinson & Shiffrin, 1968) but also because the situation is often stressful for recipients and elicits emotional reactions (Ilies et al., 2007; Belschak & Den Hartog, 2009). Feedback can, especially if it is at least partially negative, pose a threat to the self—and obviously a high threat to the self does not facilitate performance (cf. Kanfer & Ackerman, 1989; Kluger & DeNisi, 1996). It is therefore unlikely that feedback recipients can remember all the details or the exact content of the feedback they just received. Rather, feedback recipients process the feedback message more holistically by forming an overall impression of the feedback. As a consequence, feedback recipients may be particularly susceptible to memory effects during feedback processing.

One well-known memory effect that likely distorts the perception of the feedback is the *primacy effect* (Asch, 1946; Miller & Campbell, 1959). The primacy effect describes the tendency that information received first within a message is remembered better (Baddeley et al., 2009) because the information at the beginning is more distinctive (cf. Page & Norris, 1998; Hurlstone, Hitch, & Baddeley, 2014). The primacy effect occurs in various contexts (e.g., consumer behavior: Cong, 2010; credibility judgements: Nahari & Ben-Shakar, 2013; justice judgements: Lind, Kray, & Thompson, 2001; persuasion: Haugtvedt & Wegener, 1994). Furthermore, the primacy effect is stronger when compared to other well-known memory effects (e.g., the recency effect), especially if the information has high personal relevance (Haugtvedt & Wegener, 1994), which is usually the case with feedback situations at work (cf. Kluger & DeNisi, 1996). In short, we expect memory effects, especially the primacy effect, to affect how feedback is perceived.

If the primacy effect is effective during the feedback-perception phase, then the order in which feedback information is presented should be crucial for its perception. In particular, we propose that whether positive or negative information is presented first affects the perceived negativity of the feedback message as a whole (as we shall describe in more detail in the next paragraph, the perceived negativity is an important parameter in our self-regulatory action cycle). This implies that an otherwise identical feedback message that contains both positive and negative components will be perceived differently depending on what component is presented first (feedback order 'positive-negative' vs. 'negative-positive'). In fact, previous research demonstrates that feedback order affects feedback perception. For example, feedback in the order negative-positive led to lower perceived feedback accuracy (Schaible & Jacobs, 1975; Stone, Gueutal, & McIntosh, 1984) as well as desirability (Schaible & Jacobs, 1975). While not directly measured in these studies, we suspect that these effects might have been due to differences in perceived negativity of the feedback message (e.g., the more negative, the less desirable the feedback). In sum, we expect feedback in the order negative-positive to be perceived more negatively than feedback in the order positive-negative. We hypothesize:

> *Hypothesis 1*: Feedback order has an effect on feedback perception such that feedback in the order negative-positive will be perceived as more negative than feedback in the order positive-negative.

3.1.2 Motivational phase

The perception of feedback then marks the start of the motivational phase in which self-regulatory processes come into play. Self-regulatory theories generally assume that human action is goal-oriented and that individuals act upon their environment to reduce deviations of the current state from desired standards or goals (e.g., Bandura, 1991; Carver & Scheier, 1998; Frese & Zapf, 1994; Kluger & DeNisi, 1996; Lord, Diefendorff, Schmidt, & Hall, 2010; Neal, Ballard, &Vancouver, 2017; Zacher & Frese, 2018). This implies that individuals initiate behaviors (e.g., put in more effort) only if they perceive a gap or discrepancy when comparing the current state (e.g., current performance) with their standard or goal (e.g., desired performance); when they reach their standard, they disengage from goal-directed behavior (the so-called negative feedback loop; Neal et al., 2017). In other words, the perception of a performance-standard gap creates an urgency to act which then leads to motivated, discrepancy-reducing behavior.

We argue that the perceived negativity of feedback (which, among other factors, may be influenced by feedback order; cf. Hypothesis 1) has immediate consequences for the perception of a performance-standard gap and, in turn, a felt urgency to act. Feedback, as defined above, contains information about an individual's current state (i.e., current performance) and also implicitly contains information about desirable end states or standards (i.e., desirable performance level). A negative feedback signals that there is a discrepancy between the current state and the desirable performance (i.e., how performance should be improved), creating an urgency to act. The more negative the perception of feedback, then, the larger the perceived performance-standard gap and the stronger, in turn, will be the individual's felt urgency to act (e.g., willingness to invest more effort). The actions taken to reduce the discrepancy (e.g., investment of more effort) can then lead to improved performance. Thus, feedback order, which we expect to affect perceived negativity of feedback (cf. Hypothesis 1) may affect performance improvement via its effect on perceived negativity.

Hypothesis 2: Feedback order has an effect on performance improvement such that feedback in the order negative-positive will result in more performance improvement than feedback in the order positive-negative

Hypothesis 3: Perceived negativity of the feedback will mediate the effect of feedback order on performance improvement.

Note that this prediction contradicts the popular recommendation to precede negative feedback with positive feedback in order to 'soften the blow' of the negative part of the feedback message (i.e., sandwich technique or feedback sandwich). Rather, we propose that the popular feedback sandwich technique may obscure actual performance-standard gaps because feedback recipients inappropriately focus on positive aspects of the feedback message and, as a consequence, do not feel an urgency to act. In terminology of FIT, a feedback sandwich prevents the creation of a performance-standard gap which could receive attention of the feedback recipient and subsequently affect regulation of behavior.

3.1.3 Action-regulation phase

A high urgency then marks the starting point of the action-regulation phase (Phase 3, see Figure 1). At this point, the individual is, in principle, motivated to take action. Whether this motivated action will succeed (i.e., actually leads to performance improvement) depends, among other factors, on cues of the feedback and the motivational and cognitive processes instigated by these feedback cues. We consider *feedback specificity*, that is, the degree of concreteness or vagueness of the feedback (cf. Annett, 1969; Goodman, Wood, & Hendrickx, 2004) as an essential feedback cue (cf. Ilgen et al., 1979). We propose that specific feedback (as opposed to general, vague feedback) positively affects performance improvement mainly via two paths, namely, attention regulation (cf. Kluger & DeNisi, 1996) and action planning (Frese & Gielnik, 2014; Frese & Zapf, 1994; Zacher & Frese, 2018; Zacher, 2018).

First, *action plans* are "mental simulation of actions" (Kanfer et al., 2017, p. 345) that "specify the when, where, and how of action" (Gielnik & Frese, 2014, p. 419). The importance of planning for action regulation is stressed in several theories (e.g., Bandura, 1986; Gollwitzer, 1990; Kanfer, 1977; cf. Kanfer et al., 2017). For example, in goal-setting theory, planning is an important mediator of performance effects (Latham & Locke, 1991; Locke & Latham, 1990; 2006). For performance effects of feedback, too, we propose that planning is important, at least on tasks of moderate to high difficulty (on simple tasks, mere effort and reliance on available plans may be sufficient; cf. Locke & Latham, 1990; 2002; 2006); without planning and development of adequate strategies, the actions taken to close the performance-standard gap may be misled. Specific information contained in feedback should be better able to support the development of adequate plans and strategies that ultimate help to close the performance-standard gap as "specific feedback tends to leave less room for distortion" (Ilgen et al., 1979, p. 367). In terminology of FIT, specific feedback with corrective information can "help the

recipient to reject erroneous hypotheses" (Kluger & DeNisi, 1996, p. 268) or, stated positively, help the recipient to develop adequate plans to reduce the gap.

Second, specific feedback not only supports adequate planning but also helps to focus attention on the task. As stated above, a major assumption of FIT is that certain feedback cues direct attention to or away from the task, with off-task attention being detrimental to performance (an assumption held by other theories as well, e.g., Kanfer & Ackerman, 1989). Specificity of feedback is a cue that helps to turn attention to the tasks at hand while non-specific, general feedback (e.g., praise) bears the risk that attention is turned to task-irrelevant processes related to the self (Kanfer & Ackerman, 1989; Kluger & DeNisi, 1996). This increased on-task attention can then be devoted to the development of action plans and strategies that help to "increase persistent goal pursuit" (Frese & Gielnik, 2014, p. 419). In sum, action-relevant information as provided in specific feedback directs attention to the task, facilitates the development of action plans and strategies, and thus increases performance improvement. In line with this proposition, previous research demonstrated that higher feedback specificity positively affected performance improvement (Davis, Carson, Ammeter, & Treadway, 2005; Goodman et al., 2004; Northcraft, Schmidt, & Ashford, 2011). Similarly, explanation feedback was more efficacious for transfer of learning than rather unspecific correct-answer feedback (Butler, Godbole, & Marsh, 2013). We expect:

> *Hypothesis 4*: Feedback specificity has an effect on performance improvement such that specific feedback will result in more performance improvement than unspecific feedback.

It should be noted, however, that previous research does not unequivocally support positive effects of specific feedback. For example, feedback that is too specific may be detrimental to learning (Goodman et al., 2004). As already stated by Kluger and DeNisi (1996), "specificity has complex effects on overall performance" (p. 268) and "empirical data regarding specificity is not clear" (p. 268). In the present research, we focus on the combination of perceived negativity of feedback (cf. Hypothesis 1-3) and feedback specificity, as suggested in our sequential model (cf. Figure 1). We propose the combination of feedback specificity with feedback order to be crucial: The feedback recipient first needs to perceive a performance-standard gap to be motivated to change his or her behavior at all (i.e., effect of feedback order; cf. Hypothesis 1). If the so motivated recipient then receives information on how the perceived performance-standard gap can be reduced, that is, if he or she receives specific feedback,

performance improvement is most likely to occur. We propose:

> *Hypothesis 5*: Feedback order and feedback specificity will interact such that specific feedback in the order negative-positive will result in the highest performance improvement.

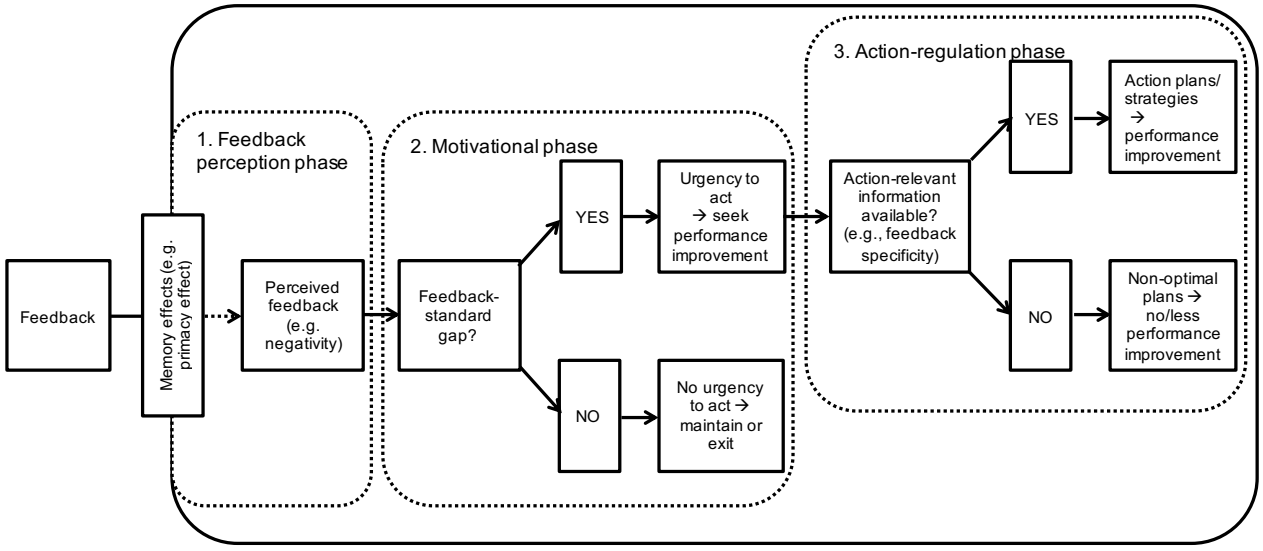

Figure 3. Schematic self-regulatory action cycle of feedback processing and response.

3.2 Study Overview

We conducted two studies to test our hypotheses. Study 1 was an online experiment that tested whether the feedback order affected perceived negativity of the feedback (Hypothesis 1). Participants worked on two situational judgement tests and received standardized and experimentally manipulated fictitious performance feedback between the two tests. Study 2 was a laboratory experiment designed to replicate the effect of feedback order on perceived negativity (Hypothesis 1) and to further test the effects of feedback specificity (Hypotheses 2, 4, and 5) as well as the proposed mediation effect of feedback order on performance improvement via perceived negativity (Hypothesis 4). In individual two-hour training sessions, 100 participants worked on two typical assessment center exercises and received genuine and individually tailored face-to-face performance feedback that was experimentally manipulated. This study design allowed us to test for feedback effects on actual

performance improvement (i.e., improvement from Exercise 1 to Exercise 2). In addition, because we also included a no-feedback control group, we were able to test for overall effects of feedback on performance improvement.

We chose these settings and tasks for the following reasons. First, situational judgment tests and assessment centers are commonly used methods for personnel selection and as such, ample evidence exists regarding their relation to job-relevant skills and behaviors (cf. Christian, Edwards, & Bradley, 2010; Hermelin, Lievens, & Robertson, 2007; Hoffman, Kennedy, LoPilato, Monahan, & Lance, 2015; McDaniel, Hartman, Whetzel, & Grubb III, 2007; Schmidt & Hunter, 1998). Second, because of this high practical relevance, we expected our volunteer participants to be particularly motivated as they perceive the tasks to be meaningful and important to them. Third, performance on these tasks is not self-evident. That is, the tasks offer little task-immanent feedback (i.e., for participants, it is difficult to determine how well they did if they do not receive external feedback), which is prerequisite for our feedback interventions to be effective.

3.3 Study 1: Feedback Effects on Perceived Negativity of Feedback Message

3.3.1 Method

3.3.1.1 Participants

The online experiment was promoted online in German forums and on social media as an opportunity to get acquainted with situational judgement tests that are used in recruitment. The sample consisted of 198 participants (17.7% male, $M = 25.81$ years, $SD = 6.79$ years with one participant not indicating his/her age). Of all participants, 48.5% were university students, 38.9% were employed, 9.1% were apprentices, 2.5% were currently in parental leave, and 7.1% were currently unemployed. The mother tongue of 94.4% of the participants was German. Participation was voluntary. Psychology students (3%) received partial course credit.

3.3.1.2 Experimental design and procedure

The experimental design was a 2 (feedback order: negative-positive, positive-negative) x 2 (specificity of the positive feedback: non-specific, specific) between-subjects design. All participants received written fictitious feedback concerning their performance in the situational judgement tests. The feedback was standardized in content, that is, all participants, depending on experimental condition, received exactly the same feedback content which did not reflect their actual performance. Factor *Feedback order* refers to the presentation order of the positive

and negative feedback component; the feedback was either presented in the order positive-negative or negative-positive. Factor *Specificity* of the positive feedback refers to the specificity of the positive feedback component and was either specific or non-specific (because we were primarily interested in the effects of feedback order we varied specificity of the positive feedback only to control for potential effects; we did not vary the specificity of the negative feedback as we did not want to give destructive feedback in this online setting; cf. Baron, 1988).

Before the experimental manipulation, participants responded to several demographic items. They then completed parts of two situational judgement tests, which served as focal tasks in this experiment, namely, the Team Role Test (Mumford, Van Iddekinge, Morgeson, & Campion, 2008) and a situational judgement test on employee integrity (Becker, 2005). Participants then randomly received one of four written fictitious feedback messages that were manipulated with regard to the two experimental factors. In particular, the specific positive feedback provided was as follows: "We take it from your reaction time that you have weighed the given response alternatives very carefully. Regarding questions 5 and 7, you have found very good solutions which support the organization. Regarding questions 9 and 16, you have shown particularly cooperative behavior." The non-specific positive feedback statement provided was as follows: "Overall, you have put a lot of effort into completing the tasks and you have worked conscientiously. All in all, you have never lost sight of the general interest. Principally, you have always behaved fair and just towards your colleagues and subordinates." All participants received the same negative feedback component: "Unfortunately, you have not answered 52% of the questions correctly. Your choice of responses regarding questions 8, 13, and 15 would have resulted in negative consequences for the organization. Regarding questions 6 and 10, you have put your own interests above those of the organization." The specific and non-specific positive feedbacks as well as the negative feedback were of approximately equal length. After receiving feedback, participants answered a manipulation check and rated the perceived negativity of the feedback. Participants were debriefed after completion of data collection.

3.3.1.3 Measures

Perceived negativity. To measure participant's perceived negativity of the feedback they had just received, participants responded to three adjectives (e.g. "negative", "praising" $\alpha = .74$) on a seven-point scale.

Manipulation and suspicion checks. To check whether participants correctly recognized the feedback order, we created two items asking about the first and last feedback component of the feedback message the participants had received. The first item asked about the first feedback component and the second item asked about the last feedback component. Participants choose between three response options per item ("positive", "negative", "neither"). Additionally, we assessed the credibility of the feedback by presenting the participants one adjective ("credible") which participants responded to on a seven-point scale.

3.3.2 Results and discussion

Means, standard deviations, and correlations of study variables are depicted in Table 11.

Table 11

Study 1 Means, Standard Deviations, and Intercorrelations of Study Variables

	M	*SD*	1	2	3	4	5
Demographic variables							
1. Gender	1.18	0.38	–				
2. Age	25.81	6.79	.11	–			
Independent variables							
3. Specificity of positive feedback	1.51	0.50	.06	-.03	–		
4. Feedback order	1.51	0.50	-.04	.05	.02	–	
Dependent variable							
5. Perceived negativity	4.56	1.02	-.12	.02	-.15*	.17*	(.74)

Note. $N = 198$; Specificity of positive feedback is coded as 1 = non-specific, 2 = specific. Feedback order is coded as 1 = positive-negative, 2 = negative-positive. Gender is coded as 1 = female, 2 = male. Where applicable, Cronbach's alpha is reported in parentheses in the diagonal.

* $p < .05$, ** $p < .01$.

3.3.2.1 Manipulation and suspicion checks

To check whether participants recognized the feedback order, we conducted independent-samples t-tests. Results indicate that, in line with what we expected, participants correctly recognized whether they had received the positive or negative feedback component first, t (196) = -5.00, $p < .001$, $d = 0.72$, or second, t (196) = 4.17, $p < .001$, $d = 0.59$.

To check whether participants perceived the fictitious feedback as credible, we

conducted a one-sample t-test. We expected mean perceived credibility of the feedback to be at least equal to the mean category of the seven-point scale (which corresponds to a rating of four). Mean perceived credibility (M = 4.41, SD = 1.31) was higher than four, a statistically significant mean difference of 0.41, 95% CI [0.23 to 0.59], t (197) = 4.41, p < .001, Cohen's d = 0.31. Additionally, we tested whether perceived credibility differed between experimental groups, which was not the case (all F < 0.37). In sum, our manipulation and suspicion checks indicate that our manipulation has been successful.

3.3.2.2 Effects on perceived negativity of feedback message

Hypothesis 1 predicted an effect of feedback order on perceived negativity. To test this hypothesis, we used a 2 (feedback order: positive-negative, negative-positive) x 2 (specificity of positive feedback: non-specific, specific) analysis of variance (ANOVA). The predicted effect is represented in the main effect of feedback order in the ANOVA. As expected, a significant main effect of feedback order emerged, indicating that participants who had received feedback in the order negative-positive perceived the feedback as more negative (M = 4.73, SD = 0.99) than participants who had received feedback in the order positive-negative (M = 4.38, SD = 1.04), F (1, 194) = 5.62, p < .05, η_p^2 = .03, d = 0.35. The other results of the ANOVA which are not pertinent to our hypotheses were as follows: main effect of specificity of positive feedback (F (1, 194) = 5.244, p < .05, η_p^2 = .03, d = 0.30, feedback with non-specific positive feedback was perceived more negatively than feedback with specific positive feedback); no interaction between feedback order and specificity of positive feedback (F (1, 194) = 0.00, p = .96).

In sum, the results provide support for our assumption that feedback order affects perceived negativity: Identical feedback messages were perceived as more negative if the negative feedback component was presented first. This supports our assumption that feedback recipients form an overall impression of the feedback they receive and that a primacy effect distorts this perception. A strength of this study is the high degree of standardization and resultant high internal validity (i.e., the feedback messages were identical with regard to content and differed only in terms of our experimental factors; in addition, the messages were standardized in that they were presented online in writing). This high degree of standardization, however, at the same time is a limitation of this study in that we had to use fictitious—and in a way non-meaningful—feedback to achieve this high degree of standardization. For the same reason, we were unable to assess performance improvement (i.e., it does not make sense to

assess performance improvement after non-meaningful feedback). Therefore, in Study 2, we provided genuine face-to-face feedback and tested effects of feedback order and specificity on actual performance improvement.

3.4 Study 2: Feedback Effects on Performance Improvement

3.4.1 Method

3.4.1.1 Participants

The laboratory experiment was promoted on the campus of a German Technical university and online as an assessment center training. The sample consisted of 100 students (51% male, M = 24.55 years, SD = 4.38 years). Participants were students of various departments with 46% of the participants having psychology as a major. Participation was voluntary. There was no compensation except for a certificate of participation. Psychology students received partial course credit for participation. Twenty percent of the participants had previous experience with assessment center.

3.4.1.2 Experimental design and procedure

The experimental design was a 2 (feedback order: negative-positive, positive-negative) x 2 (feedback specificity: non-specific, specific) between-subjects design with an additional control group (no feedback between the two tasks, N = 20). In the control condition, participants did not receive feedback until finishing the second presentation task. In the four experimental conditions (specific negative-positive, N = 20; unspecific negative-positive, N = 21; specific positive-negative, N = 20; unspecific positive-negative, N = 19), participants received genuine feedback concerning their performance between the first and the second presentation task, which was the focal task in this experiment. The feedback was genuine in content with regard to participants' performance and contained an equal number of feedback statements, but was manipulated with regard to feedback order and feedback specificity. Factor *Feedback order* describes whether feedback was presented in the order positive-negative or negative-positive with the same proportion of positive and negative feedback statements. Factor *Feedback specificity* describes whether feedback was presented specific or non-specific. Specific feedback referred to specific behaviors that participants demonstrated in the presentation whereas non-specific feedback referred to more general competencies (see below). The individual lab sessions lasted about two hours.

Before the experimental manipulation, participants responded to several demographic

items. They then received one of two case studies and started a 20-minutes preparation time. After the preparation time, participants had eight minutes to present their results, with a subsequent two-minute phase of standardized follow-up questions (sample question: “Have you already considered what short term and long-term successes will look like? At what point will our extra efforts pay off?”). During the presentation and questions, two observers took notes and rated the participant’s performance. After completing the first presentation task, participants of the experimental conditions received genuine face-to-face feedback from one of the two observers. The feedback was manipulated with regard to feedback order and feedback specificity. A sample for a specific feedback statement is “Your sense of responsibility and your decisiveness are (not) very pronounced because you (do not) take into consideration different aspects and effects on the organization and employees e.g. with statements […, examples of observed behavior].” A sample for a non-specific feedback statement is “Your sense of responsibility and decisiveness are (not) very pronounced.”

After receiving feedback, participants answered a manipulation check and rated the perceived negativity of the feedback. They then received the second case study and started with the preparation time (again 20 minutes). As with the first task, participants had eight minutes to present their results, with a subsequent two-minute phase of standardized follow-up questions. Again, during the presentation and questions, two observers took notes and rated the participant’s performance. In the control condition, participants received genuine performance feedback after finishing the second presentation task.

3.4.1.3 Material

The two presentation tasks used in the experiment were two case study presentations (or oral presentations, cf. Hoffman et al., 2015). In both case studies, the participants were in the position of a newly appointed manager. One case study dealt with a 5-star luxury resort with dissatisfying customer ratings (case study “5-star resort”). Participants had to prepare a presentation for the executive board meeting in which they were to persuade the executive board of their suggestions for improving the customer-focused and service-oriented culture. The other case study dealt with a fashion boutique in a crisis (case study “fashion boutique”). Participants had to prepare a presentation for the next employee meeting in which they were to gain the employees’ commitment and increase motivation for improving sales performance. Participants received a written task and scenario description and were allowed to use visualization tools (i.e., flip-chart, metaplan board). The order of the case studies for the

presentation tasks was counterbalanced among all participants (i.e., about half of the participants received the case study "5-star resort" in the first presentation task and the case study "fashion boutique" in the second, and vice versa).

During both case study presentations, two observers took notes and rated the participant's performance according to three broad dimensions interpersonal skills, drive, and strategic skills (cf. Meriac, Hoffman, & Woehr, 2014; Merkulova, Melchers, Kleinmann, Annen, & Tresch, 2016). The observers rated performance on a six-point scale ranging from (1) very poor to (6) excellent that included anchors reflecting very poor (1) and excellent (6) performance.

3.4.1.4 Measures

Perceived negativity. To measure participants' perceived negativity of the feedback they had just received, participants responded to two adjectives ("negative", "praising", α = .71) similar to those used in Study 1 on a seven-point scale.

Performance. To measure participants' performance in the two presentation tasks, two independent and experienced observers rated the performance. The performance ratings were then averaged to form a general performance measure (cf. Hoffman, Melchers, Blair, Kleinmann, & Ladd, 2011; Merkulova et al., 2016). The observer's inter-rater reliability (ICC) was .97 for the first presentation task and .96 for the second presentation task. Additionally, a video rating of performance was conducted for 79% of the participants (21% of video recordings were not available due to technical problems) by two independent and experienced raters. Raters watched and rated all videos independently with the same rating sheet. Video raters were blind to hypotheses, experimental conditions, and whether they rated the first or second presentation. Convergence of video-rated performance and observed performance was .92 (ICC, first presentation task) and .91 (ICC, second presentation task), respectively. Due to the high convergence between observed and video-rated performance, we used observed performance as dependent variable because we had complete data for this variable.

Manipulation check. To check whether participants in the experimental conditions correctly recognized the feedback order, we used two items identical to those used in Study 1 asking about the first and last feedback component of the feedback message the participants had received. The first item asked about the first feedback component and the second item asked about the last feedback component. Participants choose between three response options

per item (“positive”, “negative”, “neither”).

3.4.1.5 Data analyses

For the dependent variable perceived negativity, we used a 2 (feedback order) x 2 (feedback specificity) analysis of variance (ANOVA). For the dependent variable performance improvement, we used a 2 (feedback order) x 2 (feedback specificity) x 2 (time) repeated measures ANOVA. For the contrast hypothesis (Hypothesis 5), we used a t-test to compare the effects of specific feedback in the order negative-positive to all other combinations of feedback order and feedback specificity where we entered performance improvement as a gain score (i.e. difference score between performance on Task 2 and performance on Task 1, one-tailed test for directional hypothesis). We calculated mediation models (i.e. mediator perceived negativity) to test for mediation effects using Preacher and Hayes' (2004) bootstrapping method with 10,000 resamples and 95% confidence intervals (Hayes, 2013; Preacher & Hayes, 2004).

Table 12

Study 2 Means, Standard Deviations, and Intercorrelations of Study Variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
Demographic variables													
1. Age	24.55	4.38	–										
2. Gender	0.49	0.50	-.20*	–									
3. Assessment center experience	0.20	0.40	.02	-.19	–								
Independent variables													
4. Treatment	0.80	0.40	-.01	.09	.06	–							
5. Feedback specificity	0.50	0.50	-.10	-.08	-.03	.41**	–						
6. Feedback order	0.49	0.50	.09	.20	-.08	.40**	.03	–					
Dependent variables													
7. Perceived negativity	3.34	0.90	-.10	.02	-.16	–	-.07	-.34**	(.71)				
8. Performance Task 1	3.67	0.66	-.10	.13	.28*	.11	-.00	.19	-.29*	[.97]			
9. Performance Task 2	4.02	0.65	-.12	.20*	.27*	.37**	-.15	.14	-.01	.56**	[.96]		
10. Video-rated performance Task 1	3.33	0.58	.05	-.02	.26*	.20	.18	.21	-.05	.69**	.57**	[.92]	
11. Video-rated performance Task 2	3.44	0.58	-.03	-.01	.37**	.19	.06	.06	.03	.50**	.68**	.73**	[.91]

Note. $N = 100$ ($N = 80$ for variables not assessed in control group; $79 < N < 83$ for video ratings). Treatment is coded as 0 = control group, 1 = experimental groups. Feedback specificity is coded as 0 = non-specific, 1 = specific. Feedback order is coded as 0 = negative-positive, 1 = positive-negative. Gender is coded as 0 = male, 1 = female. Where applicable, Cronbach's alpha is reported in parentheses and Intra-class correlations (ICC) are reported in brackets in the diagonal.

* $p < .05$, ** $p < .01$.

3.4.2 Results and discussion

Means, standard deviations, and correlations of study variables are depicted in Table 12. We found that age was significantly correlated with the dependent variable perceived negativity and that assessment center experience was significantly correlated with the dependent variable performance. Hence, we reran all analyses pertaining to hypotheses with these variables and also order of case study presentation as additional statistical controls. The results remained stable and we therefore report our findings without these controls in the following sections.

3.4.2.1 Manipulation check

As is Study 1, to check whether participants recognized the feedback order, we conducted independent-samples t-tests. Results indicate that, in line with what we expected, participants correctly recognized whether they had received the positive or negative feedback component first, t (78) = 6.02, $p < .001$, $d = 1.36$, or second, t (75) = -6.95, $p < .001$, $d = 1.61$.

3.4.2.2 Preliminary analyses

Before testing hypotheses, we first examined whether participants improved as a result of feedback at all. For this purpose, we compared the control group (who did not receive performance feedback between the two tasks) with the experimental groups (who received feedback between the two tasks). As expected, a significant interaction of the between-subjects factor (control vs. experimental conditions) and the repeated-measurements factor (performance on Tasks 1 and 2) emerged, indicating that participants of the experimental conditions showed more performance improvement than participants of the control condition, F (1,98) = 8.23, $p < .01$, $\eta_p^2 = .08$. There was also a main effect of the repeated-measurements factor, indicating that all participants improved from Task 1 to Task 2. In sum, these results indicate that the feedback messages we provided were meaningful and effective in that they boosted performance for participants of experimental groups as compared to the control group (interaction effect), in addition to the improvement of all participants (main effect). Results also demonstrate the benefit of including a control group in our design; because we found an interaction in addition to the main effect, we can be confident that the performance improvement of the experimental groups is not a result of mere repeated measurement (e.g., practice effects) but actually a result of our feedback intervention.

3.4.2.3 Effects of feedback order on perceived negativity

Hypothesis 1 predicted an effect of feedback order on perceived negativity. This effect is represented in the main effect of feedback order in the ANOVA. As expected, a main effect of feedback order emerged, indicating that participants who had received feedback in the order negative-positive perceived the feedback as more negative (M = 3.63, SD = 0.89) than participants who had received feedback in the order positive-negative (M = 3.03, SD = 0.80), F (1, 76) = 10.42, p < .01, η_p^2 = .12, d = 0.71. The other results of the ANOVA which are not pertinent to our hypotheses were as follows: no main effect of feedback specificity (F (1, 76) = 0.40, p = .53); no interaction between feedback order and feedback specificity (F (1, 76) = 3.38, p = .07, η_p^2 = .04).

3.4.2.4 Effects of feedback order and feedback specificity on performance improvement

Hypotheses 2 and 4 predicted an effect of feedback order and feedback specificity on performance improvement. The effect of feedback order on performance improvement is represented in the interaction effect between the between-subjects factor feedback order (positive-negative vs. negative-positive) and the repeated-measurements factor (performance on Tasks 1 and 2) of the repeated-measures ANOVA. As expected, a significant interaction of the between-subjects factor feedback order (positive-negative vs. negative-positive) and the repeated-measurements factor (performance on Tasks 1 and 2) emerged, indicating that participants who received negative-positive feedback showed more performance improvement than participants who received positive-negative feedback, F (1, 76) = 4.14, p < .05, η_p^2 = .05. The effect of feedback specificity on performance improvement is represented in the interaction effect between the between-subjects factor feedback specificity (non-specific vs. specific) and the repeated-measurements factor (performance on Tasks 1 and 2) of the repeated-measures ANOVA. Contrary to our expectations, there was no significant interaction of the between-subjects factor feedback specificity (non-specific vs. specific) and the repeated-measurements factor (performance on Tasks 1 and 2), indicating that feedback specificity did not affect performance improvement, F (1, 76) = 0.30, p = .58. The other results of the ANOVA which are not pertinent to our hypotheses were as follows: main effect of the repeated-measurements factor performance on Tasks 1 and 2 (F (1, 76) = 44.10, p = <.001, η_p^2 = .37; all participants improved); no interaction effect between repeated-measurements factor performance on Tasks 1 and 2, between-subjects factor feedback order, and between-subjects

factor feedback specificity (F (1, 76) = 0. 13, p = .72); no main effect of between-subjects factor feedback order (F (1, 76) = 0.78, p = .38); no main effect of between-subjects factor feedback specificity (F (1, 76) = 0.11, p = .75).

Hypothesis 5 predicted an interaction between feedback order and specificity such that specific feedback in the order negative-positive results in the highest performance improvement. This effect is represented in the result of a t-test where we compared specific feedback in the order negative-positive to all other combinations of feedback order and specificity. As expected, the t-test revealed that the combination of feedback order negative-positive and high feedback specificity resulted in more performance improvement than the three other combinations of feedback order and feedback specificity (t (76) = 1.70, p < .05, d = 0.44).

3.4.2.5 Mediation by perceived negativity

Hypothesis 3 predicted that the effect of feedback order on performance improvement would be mediated by perceived negativity of the feedback. To test for this mediation effect, we computed a simple mediation model with feedback order as the predictor, perceived negativity as the mediator, and performance improvement as a gain score (i.e. difference score between performance on Task 2 and performance on Task 1) as dependent variable. Results are displayed in Table 13. As expected, feedback order positively affected perceived negativity such that feedback in the order negative-positive was perceived more negatively (a = -0.61, p < .01). Perceived negativity, in turn, affected performance improvement (b = 0.17, p < .05). In addition, there was no evidence that feedback order had an effect on performance improvement when perceived negativity was included in the model (c' = -0.16, p = .27). The bias-corrected bootstrap confidence interval of the indirect effect (ab = -0.10) did not include zero (-.2251 to -.0292). In sum, the results of the mediation analysis support Hypothesis 3: perceived negativity mediated the relationship between feedback order and performance improvement.

Table 13

Simple Mediation Model with Feedback Order as Predictor, Performance Improvement (Gain Score) as Dependent Variable and Perceived Negativity as Mediator

	Criterion					
	Perceived negativity			Performance improvement (gain score)		
Predictor	Coefficient	*SE*	*p*	Coefficient	*SE*	*p*
Feedback order	-0.61	.14	<.01	-0.16	.15	.27
Perceived negativity	–	–	–	0.17	.07	<.05
Constant	3.63	.14	<.001	-0.05	.31	.88
		$R^2 = .12$			$R^2 = .11$	
	$F(2, 78) = 10.10, p < .01$			$F(2, 77) = 6.52, p < .01$		

Note. Feedback order is coded as 0 = negative-positive, 1 = positive-negative. Unstandardized regression coefficients and two-tailed *p*-values are reported. Bootstrap sample size = 10,000.

$N = 80$.

3.5 General Discussion

In this study we challenged the popular recommendation of the feedback sandwich which states that criticism (i.e., negative feedback) should be preceded by some positive feedback in order to soften the blow of the criticism that is yet to come. We developed a simple, schematic self-regulatory action cycle based on common theories of self-regulation and models of feedback processing that starts with the feedback message and ends with (potential) performance improvement (see Fig. 3) to make specific predictions about the effects of feedback order and feedback specificity. Across two experimental studies, we showed that feedback order affected perceived negativity of the feedback such that feedback in the order negative-positive was perceived more negatively than feedback in the order positive-negative (Hypothesis 1). Further, feedback order affected performance improvement such that a feedback order negative-positive led to more performance improvement than a feedback order positive-negative (Hypothesis 2), and this effect was mediated by perceived negativity (Hypothesis 3). Contrary to our assumptions, feedback specificity did not affect performance improvement (Hypothesis 4) which suggests that this relationship needs further clarification. In addition, feedback order and feedback specificity interacted such that specific feedback in the order negative-positive resulted in the highest performance improvement (Hypothesis 5).

3.5.1 Theoretical and practical implications

Our findings provide initial support for the proposed self-regulatory action cycle of feedback processing. Especially, our findings show that feedback order affects the perceived negativity or subjective perception of the feedback. This is consistent with our assumption that the perception of feedback is distorted by memory effects, and in particular, a primacy effect (feedback perception phase; Phase 1). Further, it is also consistent with previous research on the effects of feedback order on perceived accuracy and desirability of the feedback (Schaible & Jacobs, 1975; Stone et al., 1984). This may lead to the conclusion that other feedback characteristics as well as other memory effects may also affect this subjective perception of the feedback.

The results further imply that feedback interventions should clearly communicate where performance needs to be improved. In particular, starting with positive feedback seems to be detrimental for performance improvement despite the underlying good intentions to "soften the blow" for feedback recipients because there will be no felt urgency to act and thus less performance improvement (motivational phase; Phase 2). Therefore, feedback givers should get straight to the point and start with negative feedback. Starting with negative feedback creates a felt urgency to act through the perceived negativity of the feedback which acts as a facilitator (mediation effect) and will therefore result in performance improvement. In terms of practical implications, feedback givers should be trained in starting feedback interventions with negative feedback. This feedback training for feedback givers may focus on creating awareness of the Mum-effect (Rosen & Tesser, 1971) or through empathic concern (Young, Richard, Moukarzel, Steelman, & Gentry, 2017).

Further, our findings showed that participants who received specific negative-positive feedback showed more performance improvement. This may indicate that feedback specificity provides the feedback recipient with action-relevant information (action-regulation phase; Phase 3). This action-relevant information then leads to the development of action strategies/plans (Frese & Sabini, 1985; Frese & Zapf, 1994; Locke & Latham, 1990; 2006; Zacher & Frese, 2018) which directs the recipient's attention to the task and leads to more performance improvement when a feedback order negative-positive has first created the needed urgency. In terms of practical implications, feedback messages should be specific in order to provide the recipient with action-relevant information and facilitate performance improvement.

While our findings have important implications for feedback interventions that explicitly or primarily target performance improvement (cf. Annett, 1969; Ilgen et al., 1979), different and concurrent motives for feedback interventions are also possible. One different motive for feedback interventions may be to establish a good and positive relationship with the feedback recipient (i.e. pursue a relationship goal). In cases were feedback interventions are mainly used to establish a good and positive relationship, other types of feedback interventions may be desirable and preferable (because the well-being of feedback recipients and/or the relationship is more important than the creation of urgency to improve performance). In terms of practical implications, insights into the effects of feedback characteristics on feedback perception, behavior, and subsequent relationship development between feedback giver and feedback recipient can help to create feedback interventions that target these specific variables and may also lead to the development of valid feedback recommendations.

3.5.2 Strengths and limitations

A strength of our study is that we conducted two experiments to test the assumptions of the self-regulatory action cycle. In both studies, we found consistent results regarding the effects of feedback order on perceived negativity of the feedback. We used fictitious feedback in Study 1 to obtain high internal validity and we used genuine face-to-face feedback in Study 2 to provide a less artificial, more meaningful work-related setting and to test for effects on actual performance. The design of Study 2 also enabled the collection of performance data and therefore testing for effects of feedback order and specificity on performance improvement. This study also included a control group without feedback between the two tasks which enabled us to test whether the performance improvement was a result of the feedback we provided or merely a result of practice. The results indicate that performance improvement occurred in the experimental groups in addition to the improvement of all participants. We can, therefore, be confident that the performance improvement of the experimental groups is not due to mere practice effects but actually a result of the meaningful feedback we provided. Moreover, we developed an action cycle which constitutes an extended and refined description of how feedback recipients perceive and process the feedback they receive. In particular, it can be considered a strength that we used cybernetic theories of self-regulation (e.g., Bandura, 1991; Carver & Scheier, 1998; 2005), including Feedback Intervention Theory (Kluger & DeNisi, 1996) and action-regulation theory (Hacker, 1973; Frese & Sabini, 1985; Frese & Zapf, 1994; Zacher & Frese, 2018), and phenomena of memory distortion to develop the self-regulatory

action cycle of feedback processing. In addition, the self-regulatory action cycle may be used to make specific and detailed predictions regarding the effects of different feedback characteristics.

However, as with all empirical research our study is not without limitations. In particular, it can be considered a limitation of our study that we only conducted between-subject studies to test for our hypothesized effects. Recent work pointed out that intraindividual effects and processes of motivation need to be better understood (cf. Kanfer et al., 2017; Lord et al., 2010, Neal et al., 2017). Therefore, a replication using within-subject experimental designs and field studies (e.g., diary studies) for example in the context of annual performance appraisals would be desirable. Further, while we studied effects of feedback order and feedback specificity on performance, we did not study effects on the well-being of feedback recipients. However, the well-being of feedback recipients is important because possible negative effects of feedback characteristics can be detrimental for employee motivation, health, and possibly also organizational performance (cf. Brett & Atwater, 2001; Kyoung Yong, Atwater, Patel, & Smither, 2016, Smither et al., 2005). Therefore, an extension of our study targeting the well-being of feedback recipients would be desirable.

3.5.3 Future research

The proposed self-regulatory action cycle of feedback processing allows to deduce further research questions and hypotheses, and can also be applied to other feedback characteristics. Further, the results of the two experiments we conducted provide initial support for the action cycle. In the following we will describe three promising areas for future research.

First, identifying moderators in the different phases of the self-regulatory action cycle can further our understanding of feedback perception and processing. This might be particularly interesting in the case of positive feedback where there will not necessarily be performance improvement due to a lack of urgency. Instead, possible responses may range from exit (e.g. shift to different task), coast, (cf. Carver & Scheier, 1998; 2005; Lord et al., 2010), to maintain (“My strategies are working, so why change them?”), or to outdo (set higher goals/raise standard as described in the positive feedback loop, cf. Carver & Scheier, 1998; 2005). It may depend on traits (e.g., goal orientation), environment characteristics (e.g., task requirements), and feedback characteristics how a feedback recipient will respond. Consistent with this, previous research already reported that attributions (Tolli & Schmidt, 2008), goal

orientation (both learning and performance goal orientation, Donovan & Hafsteinsson, 2006), and self-efficacy (Donovan & Hafsteinsson, 2006) moderate the effect of feedback/goal-performance discrepancies on goal revision. Moreover, the identification of moderators can also support the development of suitable interventions for feedback recipients. Possible moderators can be derived from the self-regulatory theories used to develop the self-regulatory action cycle.

Second, studies developing and evaluating interventions for feedback recipients that counteract or compensate the effects of feedback order on feedback perception and/or performance improvement would be highly desirable. One possibility may be to counteract the memory effects which can lead to a less distorted perception of feedback. Further, the theories of self-regulation, action-regulation, and feedback processing which we used to develop the self-regulatory action cycle as well as recent research on feedback interventions indicate that strengthening the feedback recipient's learning goal orientation (cf. Anseel, Van Yperen, Janssen, & Duyck, 2011; Cianci, Klein, & Seijts, 2010; Whitaker & Levy, 2012), action orientation, or feedback-related self-efficacy (i.e. the feedback recipient's belief that he or she can deal with the feedback provided; Linderbaum & Levy, 2010) may also be effective in compensating effects of feedback order on performance improvement in the motivational and/or action-regulation phase.

Third, studying the effects of multiple performance and feedback cycles is particularly interesting. At work, employees usually receive feedback more than once and also changes in feedback sign are likely. Therefore, it is of high theoretical and practical importance to understand how multiple performance and feedback cycles with possible changes in task and/or feedback (i.e. positive feedback changes to negative feedback and vice versa) affect performance improvement and also motivation and well-being.

4 Does It Hurt to Give Feedback? Effects of Feedback Content on Feedback Givers

Feedback usually takes two: a feedback recipient and a feedback giver. In work settings, for example, feedback may be given by a supervisor, a colleague, or a subordinate. Research on feedback often focuses on the feedback recipient, for example, how feedback frequency affects the recipient's performance improvement (Lam, DeRue, Karam, & Hollenbeck, 2011) or how feedback sign (or content) affects the recipient's emotions (Belschak & Den Hartog, 2009). Yet, surprisingly little is known about how giving feedback affects the feedback giver. Research on performance appraisal and communication describes a general discomfort on part of the feedback giver and reluctance to deliver bad news (Levy & Williams, 2004; Rosen & Tesser, 1970; Smith, Harrington, & Houghton, 2000; Tesser & Rosen, 1975; Tesser, Rosen, & Tesser, 1971). Also, popular media provides numerous recommendations on how to avoid feeling uncomfortable when giving negative feedback (e.g. McCarthy, 2018). We believe, however, that without a better understanding of feedback effects on the feedback giver, suitable interventions to encourage feedback giving in organizations cannot be developed.

Our research focuses on feedback effects from the perspective of the feedback giver. The main purpose of our research is to test the effect of feedback content (i.e. whether the feedback to be given is positive or negative) on feedback givers. We expect feedback givers to experience giving negative feedback as more demanding, to experience less positive and more negative affect when giving negative feedback, and to be less satisfied with their own feedback if feedback is negative. Altogether, we seek to contribute to the literature by explaining effects of feedback content on the giver's experienced effort, affect, and satisfaction because the feedback giver anticipates face loss and as a result attempts to mitigate face threats.

In the following sections, we will first outline the effects we expect of feedback giving on experienced effort. We will then propose effects of feedback content on the more affective variables positive and negative affect, and satisfaction with the feedback given. The theoretical mechanism we propose is depicted in Figure 1. We then report the results of an online experiment where participants provided written positive and negative feedback and a follow-up study where we test the plausibility of our theoretical assumption.

4.1 Effects of Feedback Giving on Experienced Effort

The motives underlying feedback giving are diverse. For example, feedback givers may be motivated to change the recipient's behavior, performance, opinions, or values (cf. London, 1995). To this end, they might strive to provide useful, fair, constructive, and honest feedback. Other motives relate to the social context in which feedback takes place (comparable to the social context of performance appraisal, cf. Levy & Williams, 2004; Pichler, 2012): not to hurt the recipient's feelings or to damage the relationship with the recipient (mitigate threats to the recipient's face, cf. Brown & Levinson, 1978). Furthermore, another important motive relates more strongly to the giver him- or herself: not to get hurt or judged him- or herself in the process of giving feedback, not to lose one's own face. In other words, feedback giving also constitutes a potentially face-threatening situation for the giver (cf. Brown & Levinson, 1978; 1987; Goffman, 1967).

The term face describes the positive social value a person assigns to him- or herself in social interaction (i.e. positive self-image), which may be shared by others (Goffman, 1967; 1972). More specifically, Brown and Levinson (1978, 1987) define the term positive face with reference to a person's self-esteem that comprises the individual's desire to be liked, appreciated, admired, and related to positively. A person's face can be threatened in social interactions when the self-image of the person is threatened or damaged. This threat or damage of a person's self-image occurs because one party acts contrary to the needs and desires of the other. In particular, threats to a positive face affect feelings and self-esteem of either speaker or hearer. A face threat or potential loss of face is unpleasant as there is a general desire to maintain a positive self-image (self-affirmation theory; Sherman & Cohen, 2002; 2006). Therefore, people try to mitigate potential face threats in social interactions, for example, by using politeness strategies (Brown & Levinson, 1987). We argue that this also applies to giving feedback: Preventing a potential loss of face and mitigating face threats is a powerful motive when giving feedback.

We expect that the potential face threats to the giver him- or herself become more apparent in the case of negative feedback as compared to positive feedback. Negative feedback tends to affect the recipient negatively (cf. Belschak & Den Hartog, 2009) and thus threatens the recipient's face. Due to external attributions after failure (self-serving attributions, cf. Mezulis, Abramson, Hyde, & Hankin, 2004) this may then reflect poorly upon the feedback giver and can result in mutual face threat. In other words, when giving negative feedback, the

feedback giver in a way anticipates that the feedback recipient might make self-serving attributions (for example, that the recipient may discount the quality of the feedback itself or the giver) which, in turn, threaten the feedback giver. Giving negative feedback thus threatens both the face of the recipient and the face of the giver (cf. Brown & Levinson, 1978). This makes it difficult for a feedback giver to create a feedback which meets all his or her motives and mitigates potential face threats. Because of the desire to mitigate face threats, we expect that giving negative feedback requires more cognitive resources than giving positive feedback. When giving negative feedback, the giver is concerned with how to deliver the bad news (i.e. provide useful, fair, honest, constructive etc. feedback) possibly without threatening the recipient's positive face. More importantly, the giver is also concerned with not losing his or her own positive face and will try to mitigate threats to his or her own self-esteem. Therefore, giving negative feedback takes more cognitive effort and should also be experienced as more effortful by the feedback giver.

Giving positive feedback, in contrast, is relatively easy when compared to giving negative feedback. The feedback giver is, in that case, concerned with telling the recipient what was good (or even simpler: that something was good). This will not threaten the recipient's or the giver's positive face. Therefore, the motives underlying giving positive feedback are less complex. Giving positive feedback requires less cognitive resources and should also be experienced as less effortful. In sum, delivering bad news or giving negative feedback comprises more potential face threat, requires more cognitive resources, and is experienced as more demanding. This mechanism is in line with the so-called MUM effect (Mum about Unpleasant Messages) which describes that people are generally reluctant and hesitant to deliver bad news (Rosen & Tesser, 1970; 1972; Tesser & Rosen, 1972; Tesser & Rosen, 1975; Tesser, Rosen, & Tesser, 1971; see also Dibble & Levine, 2010; 2013). Therefore, we propose an effect of feedback content on the feedback giver's experienced effort such that giving negative feedback is experienced as more demanding than giving positive feedback. We hypothesize:

> *Hypothesis 1*: Feedback content has an effect on feedback giver's experienced effort such that giving negative feedback will be experienced as more demanding.

4.2 Effects of Feedback Giving on Satisfaction with Feedback and Experienced Affect

Besides the effects of feedback content on feedback giver's experienced effort and

difficulty, we also propose effects on more affective variables such as positive and negative affect, and perceived satisfaction with the feedback. We expect that feedback givers will be less satisfied with the negative feedback they provide, and will also experience more negative and less positive affect. We assume that this effect mainly resides in the empathic reaction of the feedback giver and the anticipated loss of the feedback giver's positive face.

We assume that almost every feedback giver also has experience as a feedback recipient. It is because of this experience with receiving feedback that they know what effect the feedback they give may have on the recipient. Feedback givers thus empathize with the feedback recipient and anticipate their reaction to the feedback (Fisher, 1979; Larson, 1986) which, in the case of negative feedback, may be a negative reaction. In line with this, previous research has already shown that delivering bad news was experienced as more stressful than delivering good news (McKee & Ptacek, 2001, see also Rosen & Tesser, 1970; 1972) and that there was more upward distortion of negative feedback (Fisher, 1979; see also Tziner & Murphy, 1999; Villanova, Bernardin, Dahmus, & Sims, 1993). Moreover, giving negative feedback threatens the giver's positive face because of the feedback recipient's face threat after receiving negative feedback and subsequent self-serving attributions. These self-serving attributions will lead the feedback recipient to blame the messenger, i.e. to judge the feedback giver as less competent and less warm in order to preserve his or her self-image. More particularly, perceived competence reflects (dis)respect whereas perceived warmth reflects (dis)like (Fiske, Cuddy, Glick, & Xu, 2002). Together, those two factors form the two universal dimensions in social cognition (Fiske, Cuddy, & Glick, 2007) which are part of the stereotype content model (Fiske et al., 2002; Fiske, Xu, Cuddy, & Glick, 1999), and are also used in person perception (cf. Asch, 1946). We expect that these two dimensions are also relevant to the feedback recipient's perception of the feedback giver after receiving feedback and that feedback content affects both perceived warmth and perceived competence. Feedback recipients will perceive a feedback giver who has just given negative feedback as less likeable and less competent in order to preserve his or her own positive self-image. The feedback giver, in turn, will anticipate this negative judgement because he or she knows that despite his or her best efforts he or she cannot avoid a face threat when giving negative feedback. The feedback giver will, therefore, experience a threat of his or her own positive face.

Giving positive feedback, in contrast, should not only be easier for the feedback giver but it should also feel good. Research on prosocial behavior has shown that doing good also

increases happiness of the giver (Dunn, Aknin, & Norton, 2008; 2014, Park, Kahnt, Dogan, Strang, Fehr, & Tobler, 2017; Rudd, Aaker, & Norton, 2014) and can act as a buffer against emotional exhaustion (Grant & Sonnentag, 2010). In addition, there will be no mutual face threat as positive feedback threatens neither the face of the recipient nor of the giver.

Therefore, we propose an effect of feedback content on the feedback giver's perceived satisfaction with the feedback as well as positive and negative affect such that feedback givers should be less satisfied with giving negative feedback and experience more negative and less positive affect compared to after giving positive feedback. We hypothesize:

> *Hypothesis* 2: Feedback content has an effect on feedback giver's perceived satisfaction with the feedback such that feedback givers will be less satisfied with negative feedback.
>
> *Hypothesis 3*: Feedback content has an effect on the feedback giver's a) positive and b) negative affect such that feedback givers will experience less positive affect and more negative affect after giving negative feedback.

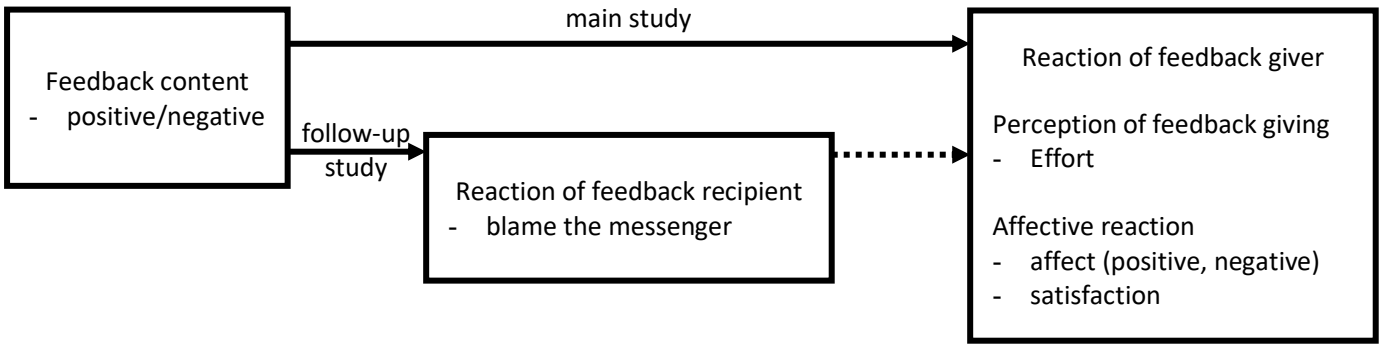

Figure 4. Theoretical model of the present study. Dashed lines represent an assumed effect which we did not test explicitly.

4.3 Main Study

We conducted an online experiment to test the hypothesized effects. We expected feedback givers to perceive giving negative feedback as more demanding, less satisfying, and to experience more negative and less positive affect. To this end, we used scenarios where we asked participants to provide written feedback (either negative or positive) to a fictitious coworker. After giving feedback, we asked participants to indicate perceived effort, perceived difficulty, perceived satisfaction, and positive as well as negative affect.

4.3.1 Method

4.3.1.1 Participants

The sample consisted of 172 participants (29.7% male, 69.8% female, 0.6% else) who were recruited via social media. Mean age of participants was 30.05 years (*SD* = 11.60 years, with one participant not indicating his or her age). Of all participants, 35.4% had a college or university degree, 51.2% had a high school diploma, 10.5% had vocational training, 2.3% had a secondary school certificate, and 0.6% had a different degree. Average work experience of participants was 8.21 years (*SD* = 11.07 years), with 73.8% of all participants having work experience (19.8% did not have any work experience and 6.4% did not indicate their work experience). Further, 29.7% had leadership experience (years of leadership experience *M* = 8.06, *SD* = 8.96; span of control *M* = 13.51, *SD* = 21.11). Participation was voluntary at all times. Psychology students (38.4%) received partial course credit for participation.

4.3.1.2 Experimental design and procedure

The experimental design was a one-factorial (feedback content: negative, positive) within-subjects design which we chose because of the higher statistical power of within-subject designs (Judd, Kenny, & McClelland, 2001). All participants received two scenarios with the instruction to give either exclusively positive or negative feedback. We used scenarios to provide participants the same context and increase internal validity (cf. Aguinis & Bradley, 2014). Before using the scenarios in this study, we pretested them in a pilot study. We randomized both the order of scenario presentation as well as the instruction order (i.e. give positive vs. negative feedback). Before the experimental manipulation, participants responded to several demographic items and indicated positive and negative affect which served as a baseline. Participants then received a general introduction to the scenarios that were yet to follow with the instruction to imagine themselves in this situation of working in a company

which produces car components (rims and brakes) for two years now. In this company, they are working in quality management with five colleagues where everyone has his or her own area of expertise and they coordinate their work autonomously. Participants then randomly received one of two scenarios describing a colleague who asked for feedback. Both scenarios contained an equal number of tasks which the colleague had completed and which had both positive and negative outcomes (so all participants had the same information about the feedback recipient, only the feedback content instruction varied).

One scenario (Mr. Schmidt) was as follows: "You have been on vacation in Italy for three weeks. Your colleague, Mr. Schmidt, filled in for you on your area of expertise, the testing of car components under different temperature conditions, as he usually does when you are away. When you return from your vacation you notice that Mr. Schmidt has sorted out more brakes as unapt than you normally do. You can find two indicators in your software. On one hand, costs have increased due to the sorting rate. On the other hand, the testing of the brakes took less time on average. You also notice that Mr. Schmidt configured the testing machines differently. The new configuration is better adjusted to the brakes which increased the testing accuracy. However, there are also unnecessary configurations which increase operating effort. In your inbox you find an e-mail from Mr. Schmidt, asking you if you were satisfied with his work in your absence. Since Mr. Schmidt will be on a seminar for the next two days, you decide to write him an e-mail."

The other scenario (Mr. Mueller) was as follows: "You have a new colleague, Mr. Mueller, for whose familiarization you are responsible. Mr. Mueller is very motivated and wants to learn quickly, so he often asks you for feedback. Mr. Mueller is a recognized expert for the QualiSafe-procedure, a procedure your team also considers to apply. Therefore, he is supposed to give a presentation about the procedure. The presentation gives a good overview of the procedure, so that you should be able to make a decision concerning its application soon. However, during the presentation Mr. Mueller occasionally gets caught up in unimportant details. Every week, one of the team is randomly chosen to write the weekly report for the central quality management and this time, the new colleague was chosen. Before submitting the report, Mr. Mueller asks you to check what he has written. There are some incorrect numbers in the summary. The rest, however, is accurate and written thoroughly. In his e-mail, Mr. Mueller also asks you for feedback about his presentation."

After reading the scenario, participants received the experimental instruction to give

either exclusively positive or negative feedback in form of e-mail. We then provided a text box within the survey where participants were asked to write their feedback. After writing the first feedback, participants answered a manipulation check and indicated experienced effort, satisfaction, and affect. They then received the second scenario with the same instruction to imagine themselves in the described situation. After reading the scenario, participants again received the instruction to give either exclusively positive or negative feedback (depending on feedback content of the first feedback instruction: if they received the instruction to give positive feedback the first time, they should now give negative feedback and vice versa) in form of e-mail. Again, we provided a text box within the survey where participants were asked to write their feedback. After writing the second feedback, participants once more answered a manipulation check and indicated experienced effort, satisfaction, and affect. Participants were thanked and debriefed at the end of the survey.

4.3.1.3 Measures

Experienced effort. To measure participants' experienced effort after giving feedback, we created two items asking participants how demanding and difficult it was to give feedback ("How demanding did you find the task?", "How difficult was the task?"). Participants responded on a five-point scale ranging from (1) *not at all* to (5) *very much*. Cronbach's alpha was .90 for positive feedback and .81 for negative feedback, respectively.

Satisfaction with feedback. To measure participant's satisfaction with the feedback they just gave, we created one item asking participants how satisfied they were with the feedback they just wrote ("How satisfied are you with your feedback?", based on Scarpello & Campbell, 1983). Participants responded on a five-point scale ranging from (1) *not at all* to (5) *very much*.

Affect. To measure participant's *positive* and *negative affect* after giving positive and negative feedback, we used a German version of the Positive and Negative Affect Schedule (PANAS; Clark, Watson, & Tellegen, 1988; Krohne, Egloff, Kohlmann, & Tausch, 1996). Participants responded on a five-point scale ranging from (1) *not at all* to (5) *extremely*. For positive affect (10 items, sample item "excited"), Cronbach's alpha was .93 for positive feedback and .92 for negative feedback, respectively. For negative affect (10 items, sample item "distressed"), Cronbach's alpha was .84 for positive feedback and .91 for negative feedback, respectively.

Manipulation checks. To check whether participants followed instruction to give either exclusively positive or negative feedback, we created two items asking participants about the content of the feedback they just gave ("How positive was your feedback?" and "How negative was your feedback?"). Participants responded on a five-point scale ranging from (1) *not at all* to (5) *very much*. In addition, the positivity and negativity of all feedbacks was rated by two independent and experienced raters (items "positive", "negative"). The raters were blind to both the instruction the participants received (i.e. give positive vs. negative feedback) and the order of scenario presentation. The inter-rater reliability (ICC) was good (cf. Cicchetti, 1994) for both positivity (.72 for positive feedback, .64 for negative feedback) and negativity (.73 for positive feedback, .64 for negative feedback).

4.3.1.4 Data analyses

For dependent variables experienced effort, satisfaction, and perceived competence of the feedback recipient, we used repeated-measures ANOVA to test for effects of feedback content (positive vs. negative). We included instruction order and scenario order as control variables in the repeated-measures ANOVA. For dependent variables positive and negative affect, we used repeated-measures ANOVA to test for effects of feedback content (positive vs. negative) where we included baseline positive or negative affect as a covariate. We also included instruction order and scenario order as control variables in the repeated-measures ANOVA.

Table 14

Means, Standard Deviations, and Intercorrelations of Study Variables (Main Study)

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	1.31	.48	-													
2. Age	30.05	11.60	.09	-												
Dependent variable experienced effort																
3. Overall	2.49	0.90	-.24**	-.02	-											
4. Positive feedback	2.39	0.99	-.20**	-.06	.88**	-										
5. Negative feedback	2.58	1.04	-.23**	.02	.89**	.57**	-									
Dependent variable perceived satisfaction																
6. Overall	3.53	0.80	.13	.05	-.34**	-.35**	-.25**	-								
7. Positive feedback	3.74	0.92	.15	.17*	-.28**	-.41**	-.09	.70**	-							
8. Negative feedback	3.33	1.15	.06	-.08	-.25**	-.16*	-.27**	.82**	.17*	-						
Dependent variable positive affect																
9. Overall	2.82	0.86	.24**	.16*	-.13	-.13	-.09	.31**	.28**	.20**	-					
10. Positive feedback	2.88	0.93	.22**	.21**	-.08	-.15*	.00	.29**	.38**	.09	.95**	(.93)				
11. Negative feedback	2.75	0.88	.24**	.10	-.15*	-.09	-.18*	.30**	.16*	.29**	.94**	.78**	(.92)			
Dependent variable negative affect																
12. Overall	1.29	0.42	.01	.01	.17*	.11	.19*	-.41**	-.15	-.45**	.01	.09	-.08	-		
13. Positive feedback	1.22	0.38	-.02	-.15	.13	.15	.08	-.36**	-.27**	-.27**	.03	.00	.05	.82**	(.84)	
14. Negative feedback	1.37	0.57	.03	.11	.17*	.06	.23**	-.37**	-.04	-.48**	-.01	.13	-.15*	.93**	.54**	(.91)

Note. N = 172. Gender is coded as 1 = female, 2 = male, 3 = other. Where applicable, Cronbach's alpha is reported in parentheses in the diagonal. * p < .05, ** p < .01.

4.3.2 Results

Means, standard deviations, and correlations of study variables are shown in Table 14.

4.3.2.1 Manipulation check

To check whether participants followed our instructions to give either exclusively positive or negative feedback, we conducted a repeated-measures ANOVA for each manipulation check item. Results indicate that, in line with what we expected, participants correctly rated their feedback to be more positive after receiving the instruction to give exclusively positive feedback, F (1, 171) = 308.58, $p < .01$, $\eta_p^2 = .64$, $d = 2.68$, and more negative after receiving the instruction to give exclusively negative feedback, F (1, 171) = 343.49, $p < .01$, $\eta_p^2 = .67$, $d = 2.84$. These results were paralleled by the feedback ratings on positivity and negativity. Concerning rated positivity of the feedback, positive feedback was rated more positively than negative feedback, F (1, 161) = 319.65, $p < .01$, $\eta_p^2 = .67$, $d = 2.82$. Concerning rated negativity of the feedback, negative feedback was rated more negatively than positive feedback, F (1, 161) = 332.96, $p < .01$, $\eta_p^2 = .67$, $d = 2.86$.

4.3.2.2 Effect of feedback content on experienced effort

Hypothesis 1 predicted an effect of feedback content on participants' experienced effort such that giving negative feedback is experienced as more demanding than giving positive feedback. This effect of feedback content on experienced effort is represented in the main effect of the repeated-measurements factor (feedback content) of the repeated-measures ANOVA. As expected, a significant main effect of the repeated-measurements factor feedback content (positive vs. negative) emerged, indicating that participants experienced giving negative feedback ($M = 2.58$, $SD = 1.04$) to be more demanding than giving positive feedback ($M = 2.39$, $SD = 0.99$), F (1, 168) = 6.70, $p < .05$, $\eta_p^2 = .04$, $d = 0.40$. The other main and interaction effects of the ANOVA which are not pertinent to our hypotheses were not significant (all $p > .13$).

4.3.2.3 Effect of feedback content on satisfaction with feedback

Hypothesis 2 predicted an effect of feedback content on participants' satisfaction with the feedback they just gave such that participants are less satisfied after giving negative feedback than after positive feedback. This effect of feedback content on experienced effort is represented in the main effect of the repeated-measurements factor (feedback content) of the repeated-measures ANOVA. As expected, a significant main effect of the repeated-

measurements factor feedback content (positive vs. negative) emerged, indicating that participants were less satisfied after giving negative feedback (M = 3.33, SD = 1.15) than after giving positive feedback (M = 3.74, SD = 0.92), F (1, 168) = 16.34, p < .01, η_p^2 = .09, d = 0.63. The other main and interaction effects of the ANOVA which are not pertinent to our hypotheses were not significant (all p > .23).

4.3.2.4 Effects of feedback content on affect

Hypothesis 3 predicted an effect of feedback content on participant's positive and negative affect such that participants experience more negative and less positive affect after giving negative feedback than after positive feedback. This effect of feedback content on positive and negative affect is represented in the main effect of the repeated-measurements factor (feedback content) of the repeated-measures ANOVAs.

For positive affect, a significant main effect of the repeated-measurements factor feedback content (positive vs. negative) emerged, indicating that participants experienced less positive affect after giving negative feedback (M = 2.75, SD = 0.88) than after giving positive feedback (M = 2.88, SD = 0.93), F (1, 167) = 7.37, p < .01, η_p^2 = .04, d = 0.42. As may be expected, baseline positive affect also had an effect (F (1, 167) = 334.57, p < .01, η_p^2 = .67, d = 2.83). The other main and interaction effects of the ANOVA which are not pertinent to our hypotheses were not significant (all p > .18), except for an interaction effect between the repeated-measurements factor feedback content and the between-subjects factor instruction order (F (1, 167) = 8.56, p < .01, η_p^2 = .05, d = 0.45, participants who first had to give positive feedback and then negative feedback reported more positive affect after giving positive feedback and less positive affect after giving negative feedback).

For negative affect, a significant main effect of the repeated-measurements factor feedback content (positive vs. negative) emerged, indicating that participants experienced more negative affect after giving negative feedback (M = 1.37, SD = 0.57) than after giving positive feedback (M = 1.22, SD = 0.38), F (1, 167) = 12.83, p < .01, η_p^2 = .07, d = 0.55. As may be expected, baseline negative affect also had an effect (F (1, 167) = 116.29, p < .01, η_p^2 = .41, d = 1.67). The other main and interaction effects of the ANOVA which are not pertinent to our hypotheses were not significant (all p > .15).

4.4 Follow-up Study

We conducted a follow-up study to test the plausibility of our assumed theoretical

mechanism. More specifically, we expected a negative reaction of the feedback giver because of the assumed face threat by the feedback recipient due to e.g. self-serving attributions. We thus also expected feedback recipients to perceive the feedback giver as less competent and less warm after receiving negative feedback. To this end, we used the written feedbacks provided by the participants of the main study and presented them to an independent sample of participants as feedback recipients in an online experiment. We then asked participants to indicate perceived competence and perceived warmth of the feedback giver. We expected these two universal dimensions in social cognition (Fiske et al., 2007) that reflect (dis)respect (i.e. competence) and (dis)like (i.e. warmth) to be relevant to the feedback recipient's perception of the feedback giver after receiving feedback. More specifically, we expected an effect of feedback content on both perceived warmth and perceived competence. Feedback recipients will perceive a feedback giver who has just given negative feedback as less likeable and less competent in order to preserve his or her positive self-image.

4.4.1 Method

4.4.1.1 Participants

The sample consisted of 113 participants (28.3% male, 70.8% female, 0.9% else) who were recruited via social media. Mean age of participants was 35.68 years (*SD* = 11. 98 years, with two participants not indicating their age). Of all participants, 25.7% had a college or university degree, 39.9% had a high school diploma, 15.9% had vocational training, 8.0% had a secondary school certificate, and 10.6% had a different degree. 31% of all participants were students. Participation was voluntary at all times. Psychology students (15%) received partial course credit.

4.4.1.2 Design and procedure

The experimental design was a one-factorial (feedback content: negative, positive) between-subjects design. Participants received either positive or negative feedback within a scenario. We used the same scenario (Mr. Schmidt) as in the main study and just changed the scenario's perspective. This means that we instructed the participants in the scenario to imagine themselves in the position of the feedback recipient (as opposed to the position of the feedback giver in the main study). Participants first received a general introduction to the scenario with the instruction to imagine themselves in the situation as described. Participants then randomly received one of the feedback messages which were provided by the participants of the main

study. We did not change anything concerning the content of the feedbacks but used them exactly how they were provided by the participants of the main study (we did correct for major spelling errors). The feedback the participants received was either positive or negative. After receiving the feedback, participants indicated how they perceived the feedback giver (perceived competence and warmth). Participants were thanked and debriefed at the end of the survey.

4.4.1.3 Measures

Perceived competence. To measure participants' perceived competence of the feedback giver after receiving positive or negative feedback, we used the five-item scale measuring perceived competence by Fiske and colleagues (2002, sample item "competent"). Participants responded on a five-point scale ranging from (1) *not at all* to (5) *very much*. Cronbach's alpha was .74.

Perceived warmth. To measure participant's perceived warmth of the feedback giver after receiving positive or negative feedback, we used the four-item scale measuring perceived warmth by Fiske and colleagues (2002, sample item "warm"). Participants responded on a five-point scale ranging from (1) *not at all* to (5) *very much*. Cronbach's alpha was .89.

Manipulation Check. To check whether participants correctly recognized that they had received positive or negative feedback, we asked about the perceived positivity of the feedback. Participants responded to three adjectives (e.g. "positive", "praising" $\alpha = .91$) on a five-point scale.

4.4.2 Results

Means, standard deviations, and correlations of study variables are shown in Table 15.

Table 15

Means, Standard Deviations, and Intercorrelations of Study Variables (Follow-up Study)

	M	*SD*	1	2	3	4	5
1. Gender	1.30	0.48	-				
2. Age	35.68	11.98	.05	-			
Independent variable							
3. Feedback content	1.46	0.50	.05	.17	-		
Dependent variables							
4. Perceived competence	3.73	0.62	-.14	-.20*	-.29**	(.74)	
5. Perceived warmth	3.31	0.94	-.07	-.23*	-.47**	.46**	(.89)

Note. $N = 113$ (except for age where $N = 111$); gender is coded as 1 = female, 2 = male, 3 = other. Feedback content is coded as 1 = positive, 2 = negative. Where applicable, Cronbach's alpha is reported in parentheses in the diagonal.

* $p < .05$, ** $p < .01$.

4.4.2.1 Manipulation check

To check whether participants recognized the feedback content, we conducted an independent-samples t-test on perceived positivity. Results indicate that, in line with what we expected, participants correctly perceived positive feedback more positively ($M = 4.09$, $SD = 0.94$) than negative feedback ($M = 2.55$, $SD = 1.29$), $t\ (91.85) = 7.14$, $p < .001$, $d = 1.35$.

4.4.2.2 Perceived competence of the feedback giver

We expected an effect of feedback content on the perceived competence of the feedback giver such that feedback recipients will judge the feedback giver as less competent after receiving negative feedback than after receiving positive feedback. We used an independent-samples t-test to test this effect. Results indicate that, in line with what we expected, participants who had received negative feedback perceived the feedback giver as less competent ($M = 3.53$, $SD = 0.64$) than participants who had received positive feedback ($M = 3.89$, $SD = 0.56$), $t\ (111) = 3.19$, $p < .01$, $d = 0.60$.

4.4.2.3 Perceived warmth of the feedback giver

We expected an effect of feedback content on the perceived warmth of the feedback giver such that feedback recipients will judge the feedback giver as less warm after receiving negative feedback than after receiving positive feedback. We used an independent-samples t-test to test this effect. Results indicate that, in line with what we expected, participants who had received negative feedback perceived the feedback giver as less warm (M = 2.83, SD = 0.91) than participants who had received positive feedback (M = 3.72, SD = 0.75), t (99.17) = 5.56, $p < .001$, d = 1.05.

4.5 Discussion

Previous research has often focused on how feedback affects the feedback recipient. Our studies provide a change in perspective by focusing on feedback effects from the perspective of the feedback giver. We tested the effect of feedback content (i.e. whether the feedback to be given is positive or negative) on feedback givers. In particular, we investigated whether feedback givers experienced giving negative feedback as more demanding, experienced less positive and more negative affect when giving negative feedback, and were less satisfied with their own feedback if feedback was negative. We theoretically explain these effects with anticipated face loss, the resulting attempts to mitigate face threats, and empathic reactions of the feedback giver due to his or her personal experience with receiving feedback. As expected, feedback content had an effect on the giver's experienced effort such that giving negative feedback was experienced as more demanding than giving positive feedback (Hypothesis 1). Consistent with our assumptions, feedback content also had an effect on the giver's perceived satisfaction with the feedback such that feedback givers were less satisfied with negative feedback than with positive feedback (Hypothesis 2). In addition, feedback content had the assumed effect on the feedback giver's positive and negative affect such that feedback givers experienced less positive affect and more negative affect after giving negative feedback than after giving positive feedback (Hypothesis 3). The results imply that feedback may also negatively affect the feedback giver which is unfortunate because it may prevent feedback from taking place. Comparable to the delivery of bad news, feedback givers may be reluctant and hesitant to deliver bad news (cf. Dibble & Levine, 2010; 2013; Rosen & Tesser, 1970; Tesser & Rosen, 1972; Tesser & Rosen, 1975; Tesser, Rosen, & Tesser, 1971). In particular, our proposed theoretical mechanism and the results we obtained in our studies may explain why this reluctance to transmit bad news exists, namely because of anticipated face

loss and empathic reactions.

Further, we provided a theoretical mechanism for the proposed effects of feedback content on the feedback giver by applying concepts of Face Theory (Goffman, 1967, see also Brown & Levinson, 1978; 1987) to the social situation of feedback giving. In particular, we assumed that anticipated face threats and resulting attempts to mitigate those threats explain why giving negative feedback affects the feedback giver more negatively than giving positive feedback. Moreover, we provided support for the plausibility of our theoretical assumption in the Follow-up Study where we demonstrated effects of feedback content on the recipient's perception of the feedback giver (the giver was indeed perceived as less warm and less competent after receiving negative feedback). The application of concepts of face and face threat may provide potential strategies to facilitate feedback giving. More specifically, politeness theory (Brown & Levinson, 1987) suggests that politeness strategies may be effective in mitigating face threats. Therefore, politeness strategies may be effective in interventions to encourage feedback giving. However, it may be a balancing act to identify feedback strategies that are both feasible for feedback givers and effective in improving the feedback recipient's performance.

4.5.1 Strengths and limitations

A strength of our studies is the experimental design in both the Main and Follow-up Study. Especially the use of scenarios in the Main Study allowed for a more naturalistic setting than in laboratory experiments with a simultaneous increase in internal validity (Aguinis & Bradley, 2014). In addition, the general introductions to the scenarios in both studies served as a scenario framework. This scenario framework offered a more detailed description of the situation in which the participants had to imagine themselves in and therefore constitutes an even higher standardization of the experimental setting. We used validated scales to measure the dependent variables positive and negative affect in the Main Study, and for the dependent variables perceived warmth and perceived competence in the Follow-up Study. We provided a theoretical mechanism on the basis of anticipated face loss due to mutual face threat and empathic reactions of the feedback giver which explains why giving negative feedback is experienced more negatively by feedback givers than giving positive feedback. More specifically, we checked the plausibility of our theoretical assumption in the Follow-up Study where we used the authentic written feedbacks provided by the participants in the Main Study.

As with all empirical research, there are also limitations to our studies. In the Main Study, participants provided written feedback on the basis of fictitious scenarios. However, we would expect even severer reactions of the feedback giver when providing actual face-to-face feedback. In the case of face-to-face feedback, a feedback giver should experience even more face threat as he or she would also expect an immediate response of the feedback recipient and possibly negative effects on long-term cooperation. Our data in both studies were single-source and self-report. However, we are confident that our research design is not deficient and does not distort our findings. The dependent variables used in the two studies are measured appropriately via self-report (e.g., positive and negative affect, experienced effort; cf. Chan, 2009; Conway & Lance, 2010). In particular, the dependent variables chosen in the Main Study explicitly target the feedback giver's individual experience when giving feedback as we were interested in that individual experience. Further, in the Follow-up Study we wanted to check the plausibility of our assumed theoretical mechanism by demonstrating effects of feedback content on the recipient's evaluation of the feedback giver. Nevertheless, a replication of our findings with more behavioral data (e.g., explicit attributions of the feedback recipient, potential effects on feedback givers performance after giving feedback) would be desirable. Further, we did not explicitly test our theoretical assumption of mutual face threat (dashed line in Figure 1) in our studies. Therefore, a replication of our findings in a more naturalistic setting would be desirable to test for this assumed effect.

4.5.2 Future research

Our study is among the first to theoretically embed and empirically test effects of feedback content on feedback givers. Yet, several questions concerning the effects of feedback on feedback givers remain unanswered, which opens up new areas of future research. We suggest three promising areas for future research.

First, identifying moderators on the side of the feedback giver that augment or buffer the assumed face threat may provide deeper insights into the experiences of feedback givers and may also provide a stronger test of our assumed theoretical mechanism. As an example, potential moderators may be motives for power and affiliation which are assumed to affect whether the feedback given is constructive or destructive (cf. London, 1995). More specifically, feedback givers high in the affiliation motive might experience giving negative feedback as more demanding and stressful than feedback givers low in the affiliation motive because of the feared damaging effects the feedback might have on the relationship with the

feedback recipient. Concerning the power motive, feedback givers high in the power motive might experience giving negative feedback as less demanding and stressful than feedback givers low in the power motive because giving negative feedback satisfies their desire to lead and dominate. In addition, it may be worthwhile to identify moderators on the side of the feedback recipient that augment or buffer the mutual face threat because of more or less pronounced self-serving attributions.

Second, studying the effects of other feedback characteristics on feedback givers, like for example feedback order (i.e. the order in which positive and negative feedback is presented), feedback frequency, and feedback specificity, may also be essential to understand how feedback affects the feedback giver. In particular, one might expect an effect of feedback order on the giver's experience such that the feedback giver will feel more comfortable giving feedback in the order positive-negative. If this kind of effect of feedback order on the feedback giver exists, it may also provide an explanation as to why there subsists a practical recommendation to "sandwich" the negative feedback (i.e. to precede negative feedback with some positive feedback). Concerning feedback frequency, the pressure to constantly provide feedback may be very stressful for feedback givers and may also cause a feedback giver to refrain completely from giving feedback.

Third, the relationship quality between feedback giver and feedback recipient and its effect on the giver's reaction was not part of this study as it was controlled because of the scenarios we used in both studies. Research on e.g. performance appraisal already demonstrated that the ratee-rater relationship plays an important role and affects both rater and ratee (cf. Levy & Williams, 2004; Pichler, 2012). Therefore, it may be possible that the relationship quality also affects the feedback giver's experience when giving positive or negative feedback. A feedback giver may feel less bad when giving negative feedback to a feedback recipient with whom he or she has a no good relationship. However, an opposite effect may also be possible, namely that the feedback giver feels even worse when giving negative feedback to a recipient with whom he or she has no good relationship. A more naturalistic setting or experimental variation of relationship quality would allow to test for potential effects of relationship quality.

5 Conclusion

Practical recommendations highlight appreciation and feedback to be effective in boosting employee motivation and performance. In particular, several of those practical recommendations concerning feedback provide explicit instructions on how the feedback should be designed in order to maximize performance and minimize negative feelings on the side of the feedback giver. This dissertation aimed at scrutinizing some of the practical recommendations on appreciation and feedback in the context of existing theories and empirical results, and also at putting these recommendations to an empirical test. We developed three categories of research questions which we addressed in the six empirical studies of this dissertation.

The first category of research questions focused on the assumed positive effects of appreciation at work. We addressed these research questions in two studies in Chapter 2, where we investigated whether the effects of the popular construct appreciation are as positive as commonly assumed. We used social exchange theory and the norm of reciprocity to explain why employees who feel appreciated at work will return this goodwill with increased engagement and OCB. Consistent with our assumptions, perceived appreciation positively affected work engagement and OCB in both studies, even after controlling for the stability of the dependent variables in Study 2 and while controlling for the well-known social exchange mediators LMX and POS in both studies. Perceived appreciation explained unique variance in work engagement and OCB that the related constructs LMX and POS did not account for. Positive reciprocity norms moderated the effect of perceived appreciation on work engagement which further supports our proposition that social exchange and especially the norm of reciprocity theoretically explain why perceived appreciation has positive effects on work outcomes. Unexpectedly, positive reciprocity norms did not moderate the effect of perceived appreciation on OCB, suggesting that this relationship may need further investigation. In addition, the feedback environment acted as a contextual variable antecedent to perceived appreciation which in turn affected work outcomes engagement and OCB (mediation effect), an effect which remained stable even after controlling for LMX and POS.

The second category of research questions focused on the effects of feedback on the feedback recipient, and especially on the effects of feedback order and specificity on performance improvement. We addressed these research questions in two studies in Chapter 3.

We challenged the popular recommendation of the feedback sandwich which states that positive feedback should precede criticism (i.e., negative feedback) because this positive feedback should soften the blow of the criticism that is yet to come. Based on common theories of self-regulation and models of feedback processing, we developed a simple, schematic self-regulatory action cycle that starts with the feedback message and ends with (potential) performance improvement. This action cycle enabled specific predictions about the effects of feedback order and feedback specificity. Across two experimental studies, we showed that feedback order affected both perceived negativity of the feedback such that feedback in the order negative-positive was perceived more negatively than feedback in the order positive-negative and performance improvement such that a feedback order negative-positive led to more performance improvement than a feedback order positive-negative. Further, perceived negativity mediated the effect of feedback order on performance improvement. Contrary to our assumptions, feedback specificity did not affect performance improvement suggesting that this relationship needs further clarification. In addition, there was an interaction between feedback order and feedback specificity such that specific feedback in the order negative-positive resulted in the highest performance improvement.

The third category of research questions focused on the effects of feedback content (i.e. if the feedback to given is positive or negative) on the feedback giver. We addressed these research questions in two studies in Chapter 4. We assumed that a feedback giver anticipates a loss of face when giving negative feedback, as a results attempts to mitigate face threats, and also reacts empathetically due to personal experience with receiving feedback. Therefore, we expected feedback givers to experience giving negative feedback as more demanding, less satisfying, and to experience less positive and more negative affect when giving negative feedback. Consistent with our assumptions, feedback content had an effect on the giver's experienced effort such that giving negative feedback was experienced as more demanding than giving positive feedback. Further, feedback content had an effect on the giver's perceived satisfaction with the feedback such that feedback givers were less satisfied with negative feedback than with positive feedback. Feedback content also had the assumed effect on the feedback giver's positive and negative affect such that feedback givers experienced less positive affect and more negative affect after giving negative feedback than after giving positive feedback. In a follow-up study we provided support for the plausibility of our theoretical assumption by showing that the feedback giver was indeed perceived as less warm

and less competent after receiving negative feedback.

The studies assembled in this dissertation contribute to the existing research in several ways. Chapter 2 embedded perceived appreciation in social exchange theory and the norm of reciprocity (Cropanzano et al., 2017; Cropanzano & Mitchell, 2005) which theoretically explain the assumed positive effects of appreciation on motivation and performance. The results obtained in the studies extend previous research which focused on the relationship between appreciation and well-being (Stocker et al., 2010; Stocker et al., 2014). Moreover, by testing appreciation against well-established social exchange mediators POS and LMX we showed that perceived appreciation is not redundant but explains unique variance over and above POS and LMX. In Chapter 3 we developed a self-regulatory action cycle to make specific predictions about the effects of feedback order and specificity. In particular, this self-regulatory action cycle constitutes an extended and refined description of how feedback recipients perceive and process the feedback they receive and is based on cybernetic theories of self-regulation (e.g., Bandura, 1991; Carver & Scheier, 1998; 2005), including Feedback Intervention Theory (Kluger & DeNisi, 1996) and action-regulation theory (Hacker, 1973; Frese & Sabini, 1985; Frese & Zapf, 1994; Zacher & Frese, 2018), as well as phenomena of memory distortion. Moreover, this self-regulatory action cycle may be used to make specific and detailed predictions about the potential effects of different feedback characteristics. Finally, Chapter 4 provided a change in perspective by focusing on the effects of feedback and especially feedback content on the feedback giver. The feedback giver has to our knowledge largely been neglected in research even though he or she is a prerequisite for effective feedback (without a feedback giver there would usually be no external feedback). The theoretical mechanism we proposed and the results we obtained in our studies may provide insights into why feedback givers might be reluctant to give negative feedback, namely because of anticipated face loss and empathic reactions. The Discussion sections of the respective chapters (sections 2.7, 3.5, and 4.x) offer in-depth discussions of the findings and implications of the studies in this dissertation. The aim of the remaining part of this present chapter is to put the findings in a broader perspective and to point out directions for future research. The following sections will discuss the advantages and similarities of feedback and appreciation at work (section 5.1), the challenges and future research perspectives of feedback and appreciation (sections 5.2), and the lessons learned about practical recommendations (section 5.3).

5.1 Advantages of Feedback and Appreciation at Work

There are several advantages of appreciation and feedback at work. Both appreciation and feedback can be used on-the-job which enables immediate effects on employee motivation and performance. Concerning appreciation, the effects on motivation and performance should be immediate due to the feelings of obligation and indebtedness caused by the perception of appreciation and which can be reduced best by reciprocating (Cropanzano & Mitchell, 2005; Settoon et al., 1996). Concerning feedback, the effects on performance improvement can also be immediate (especially if the feedback is not delayed). The feedback would directly cause a feedback-standard gap which then creates an immediate urgency to act (cf. Carver & Scheier, 1998; Kluger & DeNisi, 1996).

Another important advantage of appreciation and feedback is that both tools are used individually. Individualized appreciative behavior should be most effective in boosting employee motivation and performance (because individualized appreciation signals acknowledgement, see definition in section 1.1). In particular, supervisors may also consider an employee's positive reciprocity norm when preparing to show appreciation to employees. Concerning feedback, a customized feedback content which exactly matches the recipient's performance is needed to enable performance improvement.

Further, both appreciation and feedback can be used in a day-to-day or informal manner. This daily and informal use of appreciation and feedback is cost-efficient which is an important advantage for organizations, especially organizations with high profit-orientation. The informal use of appreciation and feedback requires limited time and preparation compared to the time and preparation required for e.g. formal feedback. Moreover, an informal use of feedback would match the general desire of the feedback recipient to receive more information about his or her performance (cf. Farr, 1993). In addition, giving day-to-day feedback might also be less uncomfortable for feedback givers. However, the development of interventions that foster the ability and willingness to provide informal feedback would be desirable (cf. Farr, 1993).

In this context it should be noted that there is a small overlap between the concepts of appreciation and feedback. Positive feedback (especially unspecific positive feedback or praise) constitutes a possible way of showing appreciation to employees. While this positive feedback may boost motivation and performance due to the need to reciprocate or the desire to

outdo (set higher goals/raise standard as described in the positive feedback loop, cf. Carver & Scheier, 1998; 2005), it will not create an urgency for performance improvement because of a feedback-standard gap and negative feedback loop (cf. Carver & Scheier, 1998; 2005; Kluger & DeNisi, 1996; Neal et al., 2017). Further, as shown in Chapter 2, a favorable feedback environment signals appreciation to employees. However, we believe that there are numerous more ways to show appreciation to employees and that feedback also is more diverse in its characteristics and effects. We are, therefore, confident that both concepts can be investigated both individually and simultaneously.

5.2 Challenges and Future Research Perspectives of Feedback and Appreciation

There are also challenges associated with the use of feedback and appreciation at work. Both feedback and appreciation cannot be used carelessly. As an example, the frequency of appreciation and feedback may be crucial for the effectiveness. For appreciation, as already stated in Chapter 4, too much appreciation could turn the socioemotional resource into a stressor because of the immense pressure to reciprocate. For feedback, scientific results showed an inverted u-shaped relationship between feedback frequency and task performance, indicating that for optimal performance improvement a "medium" feedback frequency should ideally be established (Lam et al., 2011). Further, the ideal medium feedback frequency could be task-dependent which would result in a need to separately identify the ideal feedback frequency per task. Needless to say, feedback frequency could also affect the feedback giver such that he or she could stop giving feedback completely if the negative effects on him-or herself are too much. In sum, future research could focus on identifying the ideal frequencies for feedback and appreciation depending on the job and/or task for both the provider and recipient of feedback and appreciation.

In addition, both feedback and appreciation need to be meaningful in order to be effective in boosting employee motivation and performance. Concerning appreciation, a simple and constant "how good that you are here" might not be enough. Our definition of appreciation already states that employees feel appreciated when their performance and/or thoughts and opinions about work-related issues are actively acknowledged. Further, our research showed that a favorable feedback environment which is characterized by available, the credible, and high-quality feedback (Steelman et al., 2004) acted as antecedent to perceived appreciation at work. This contextual variable antecedent to appreciation shows that meaningful feedback is one way to signal appreciation, which thus highlights the importance of meaningfulness for

appreciation. The identification of further antecedents to appreciation may provide even more insight into the relevance and versatile forms of meaningful appreciative behavior. Concerning feedback, the development and design of useful feedback requires preparation. We believe that a thorough preparation of feedback is crucial for the feedback to be effective in boosting performance. If feedback does not explicitly target the areas for performance improvement, incorrect feedback-standard gaps (cf. Kluger & DeNisi, 1996) may be developed which may then lead to the development of incorrect action plans (cf. Gielnik & Frese, 2014, Zacher & Frese, 2018). Incorrect action plans will then hinder performance improvement. However, it may be uncomfortable for the feedback giver to start with negative feedback (because giving negative feedback is experienced as more demanding, less satisfying, and results in less positive and more negative affect, as shown in Chapter 4). Further, it may require effort to prepare specific negative and positive feedback which could also affect the feedback giver negatively. Future research could focus on the effects of feedback order and specificity on the feedback giver in order to develop strategies and/or interventions to facilitate giving performance-improving feedback.

Several characteristics and traits of the recipient of appreciation and/or feedback may act as moderators on the effects of appreciation and feedback on motivation and performance. In the case of appreciation, we already showed that positive reciprocity norms which reflect the extent to which people keep score of exchange events because of the strong belief that good treatment should be positively repaid (Cropanzano & Mitchell, 2005; Eisenberger et al., 1986; Eisenberger et al., 2004; Uhl-Bien & Maslyn, 2003) moderated the effect of perceived appreciation on work engagement. Concerning appreciation, possible moderators can be derived from social exchange theory and the norm of reciprocity (cf. Cropanzano & Mitchell, 2005; Cropanzano et al., 2017). Concerning feedback, possible moderators can be derived from the self-regulatory theories we used to develop the self-regulatory action cycle (cf. Carver & Scheier, 1998; Frese & Zapf, 1994; Kluger & DeNisi, 1996; Lord et al., 2010; Neal et al., 2017; Zacher & Frese, 2018) and previous research on moderators on the effects of feedback (e.g. goal orientation, self-efficacy, cf. Cianci et al., 2010; Davis et al., 2005; Donovan & Hafsteinsson, 2006). Moreover, several characteristics and traits of the provider/giver of appreciation and/or feedback could also affect the effectiveness of the appreciation and/or feedback provided. In particular, these characteristics of the provider of appreciation and/or feedback could affect both the content and the frequency of appreciation and/or feedback (cf.

London, 1995) which could then, in turn, affect both the provider and the recipient of appreciation and feedback. Therefore, the identification of moderators on the side of the recipient of appreciation, the provider of appreciation, the feedback recipient, and the feedback giver would provide further insights into the effect of appreciation and feedback at work, and could also support the development of suitable interventions for recipients of appreciation and/or feedback as well as providers of appreciation and/or feedback.

5.3 Practical recommendations – how effective is common practice?

The aim of this dissertation was to tackle some of the practical recommendations concerning feedback and appreciation at work. It is not very surprising that practical recommendations tend to emerge and gain influence when there either exists virtually no empirical evidence (appreciation) or a nearly overwhelming yet confusing host of empirical evidence (feedback). In the case of appreciation with virtually no empirical evidence, the effectiveness of something is often simply assumed (comparable to a truth bias, cf. Levine, Park, & McCormack, 1999; Levine, Serota, & Shulman, 2010). In the case of feedback with an overwhelmingly high but confusing number evidence, those practical recommendations may function as heuristics that provide simple and clear guidelines because the systematic analysis of all the evidence would be too time-consuming and may lead to no final conclusion. Many of the given advice may also be based on practical experience of the feedback giver which indisputably mainly focuses on how pleasant the situation is perceived rather than on the effectiveness and long-term performance improvement.

The studies in this dissertation do not provide a final conclusion about whether practical recommendations in general should be accepted or rejected. Instead, we showed that in some cases like appreciation, some practical recommendations may indeed have the intended effects and thus provide easy to use guidelines to improve employee motivation and performance. In other cases like feedback order, we showed that theory and empirical evidence opposes the practical recommendations which should thus be revised. Regarding feedback specificity, evidence suggests that the effects of specificity are far more complex than intuitively assumed and that likely interactions with other feedback characteristics (e.g. feedback order) also influence the effects of feedback specificity. A prudent approach would be to refrain from practical recommendations regarding feedback specificity until the effects are more clear. And in other cases like feedback giving, a general understanding of how feedback giving affects the feedback giver is needed first before we can even begin to question and/or investigate the

practical recommendations concerning feedback giving.

The practical recommendations tackled in this dissertation are not the only ones existing. There are numerous practical recommendations on various topics in industrial and organizational psychology, like for example on teamwork, training, leadership, etc. One important question therefore is: What can we do to facilitate the development and dissemination of valid practical recommendations? To name only a few possible solutions, one possibility may be to question practical recommendations and bring them in the context of existing theory and evidence. Another possibility may be to provide more meta-analyses and extensive reviews with clear practical implications to generate an easier overview over and easier access to scientific results. It may also pay off to enable discussions on practical recommendations in both scientific as well as practitioner-related journals, conferences, and on the internet. Either way, the development and dissemination of valid practical recommendations can contribute to a sustainable improvement of working conditions.

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Curriculum Vitae

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Professional Experience

12/13 – today	Technische Universität Darmstadt, Organizational and Business Psychology, research associate/PhD student
02/13 – 05/13	HypoVereinsbank München, internship
08/12 – 09/12	Johannes Gutenberg Universität Mainz, Teaching Assistant
08/11 – 10/11	BASF Coatings GmbH Münster, internship
11/08 – 07/13	Tutor, private and Studienkreis Ludwigshafen
04/08 – 07/08	Freelancer, Institute for market research Dima, Mannheim
07/07 – 08/07	„Camping de la Fontaine“ Larmor-Plage (France), internship

Education

2008 – 2013 Psychology, Johannes Gutenberg Universität Mainz

- Main focus: work, organizational, and business psychology
- Diploma Thesis: „Estimating Biases and Discrimination Performance in Two-Interval Tasks: Models and Empirical Evidence“

2003 – 2008 Carl-Bosch Gymnasium Ludwigshafen

2000 – 2003 Hannah-Ahrendt-Gymnasium Hassloch

Publications

Gauglitz, R. & Keith, N. (submitted). Does it pay to appreciate? An empirical test and theoretical explanation for the positive effects of perceived appreciation at work.

Gauglitz, R. & Keith, N. (submitted). Good News or Bad News First? Beginning a Feedback Message with Negative Feedback Leads to More Performance Improvement.

Gauglitz, R. & Keith, N. (submitted). Does It Hurt to Give Feedback? Effects of Feedback Content on Feedback Givers.

Conference Contributions

Gauglitz, R., Keith, N., & Frank, C. (2018, September). Effekte einer positiven Fehlermanagementkultur auf Mitarbeiter/innen: Ergebnisse einer Längsschnittstudie. In D. Horvath & A. Klamar, Fehlermanagementkultur, Fehlerorientierung und Lernen aus Fehlern: Neue Erkenntnisse. Symposium conducted at the 51th meeting of the German Psychological Association (DGPs) in Frankfurt, Germany.

Gauglitz, R. & Keith, N., (2018, April). Positive effects of perceived appreciation at work. Paper presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology in Chicago, USA.

Gauglitz, R., Keith, N., & Kanwischer, S. (2017, September). Wie schlimm ist Feedback-Geben? Effekte von Feedback-Inhalt auf empfundene Anstrengung und Affekt von Feedback-Gebenden. Paper presented at the 10th conference on Industrial and Organizational Psychology of the German Psychological Association in Dresden, Germany.

Höpfner, J., Gauglitz, R., & Keith, N. (2017, September). Welches Feedback-Sandwich schmeckt am besten? Untersuchung des Effekts von Feedback Reihenfolge und -Spezifität auf Feedback-Empfänger/innen. Paper presented at the 10th conference on Industrial and Organizational Psychology of the German Psychological Association in Dresden, Germany.

Gauglitz, R., Keith, N., & Gülbak, B. (2017, Mai). Delivering a tasteful feedback sandwich - A scenario experiment on feedback order and feedback specificity. Poster presentation at the 18th congress of the European Association of Work and Organizational Psychology (EAWOP), Dublin, Ireland.

Gauglitz, R., Keith, N., Hechler, A., & Krischke, K. (2016, September). Wie förderlich ist ein Feedback-Sandwich? - Experimentelle Überprüfung von Feedback-Reihenfolge und -Spezifität in einem face-to-face Feedback-Setting. In R. Gauglitz, I. Cramer, & N. Keith, Feedback im Arbeitskontext – Neuere Erkenntnisse über kognitive und motivationale Effekte

sowie die Rolle von Personenmerkmalen. Symposium conducted at the 50th meeting of the German Psychological Association (DGPs) in Leipzig, Germany.

Gauglitz, R. & Keith, N. (2015, September). Heute schon Feedback bekommen? Auswirkungen täglichen Feedbacks auf das Erleben und Verhalten bei der Arbeit. Paper presented at the 9th conference on Industrial and Organizational Psychology of the German Psychological Association in Mainz, Germany.

Balk, R., Keith, N., Anders, B., & Steinmetz, L. (2014, September). Ist Fehler = Fehler? Die Lernbereitschaft ist abhängig von der Fehlerkonsequenz und der Regulationsebene. Poster presented at the 49th meeting of the German Psychological Association (DGPs) in Bochum, Germany.

Balk, R., Klöckner, F. & Oberfeld, D. (2013, Oktober). A new look on „order effects“ and sensitivity in two-interval discrimination tasks: Decisions weights and internal noise. Presentation at the 29th Annual Meeting of the International Society for Psychophysics: Fechner Day 2013. Freiburg, Germany.

Obligatory Declaration

I declare that I have developed and written the enclosed doctoral dissertation entitled "Feedback and Appreciation at Work" completely by myself, and have not used sources or means without declaration in the text. Any thoughts from others or literal quotations are clearly marked. This dissertation was not used in the same or in a similar version to achieve an academic grading or is being published elsewhere.

Nürnberg, 2/14/2019

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